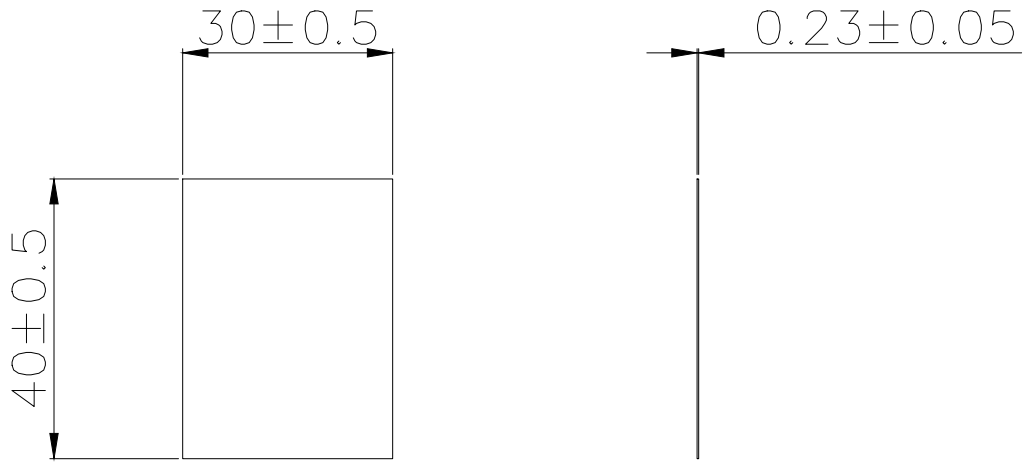
兆聯精密有限公司
Zhaolian PRECISION CO.,LTD

SPECIFICATION FOR APPROVAL

產品名稱 Part Name	Absorb material
產品編號 Part No	ZL-GC-000048
材質 Material	EFW(02)-240X240T0800 0.23T
尺寸 Size	40*30*0.23T
客戶名稱 Customer	鈺緯科技開發股份有限公司
客戶產品編號 Customer Part No	3H190002204 (H0232)
客戶料號名稱 Customer Part Name	(EFW(02)-30*40*0.03mm,KEMET)
承認日期 Date	2026.10.06

設計驗證工程課
2026 -10- 15
發行

APPROVAL BY



材質：EFW(02)-240X240T0800 0.23T

方向性： 離型紙在下，全斷出貨

設計驗證工程課
2026 -10- 15
發行

3H190002204(H0232)

COUNT	REVISION	DATE	SIGN.
A	新規發行.	2026.09.30	Cheng

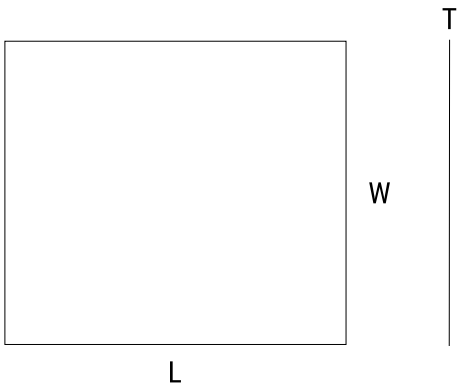
TOL / RANGE			√					√	√
	N1	N2	M1	M2	S1	S2	CN	0	ANG.
0~6	0.20	0.25	0.15	0.20	0.05	0.10	0.50	0.05	0.5
6~30	0.20	0.25	0.15	0.25	0.10	0.15	1.00		
30~120	0.25	0.35	0.20	0.30	0.20	0.40	2.00		
120~300	0.30	0.35	0.25	0.40	0.40	0.80	3.00		
300~600	0.40	0.50	0.30	0.50	0.50	1.00	3.00		
600~1200	0.50	0.60	0.50	0.60	0.60	1.20	4.00		

APPR BY	SIZE: A4	PART NO. ZL-GC-000048	兆聯精密有限公司 Zhaolian PRECISION CO.,LTD
CHK BY	ANGLE:	USE FOR:	
DWN BY	UNIT: MILLIMETERS	DWG.NO. / SCALE: 1:1	TITLE: Absorb

EFW(02)-240X240

Aliases (UFSEFW020AT000)

EMI Suppression, KEMET, EFW, Sheet, Noise Suppression



General Information	
系列	EFW
様式	Sheet
描述	Flex Suppressor High Permeability Type
特性	High Permeability Type
RoHS	Yes
認證	UL94 HB, UL File No. E176124
環境	RoHS Compliant, Halogen Free, PVC Free, Lead Free, Red Phosphorus Free

Dimensions	
片材尺寸	240x240mm
L	240mm NOM
W	240mm NOM
T	0.2mm NOM

Packaging Specifications	
典型元件重量	43.78 g

Specifications	
溫度範圍	-40/+105°C
磁導率	230 u at 3 MHz
有效頻率	1 MHz to 3GHz
比重	4 TYP
熱導率	1.27 typical
表面電阻率	1 MOhm/sq. TYP

Statements of suitability for certain applications are based on our knowledge of typical operating conditions for such applications, but are not intended to constitute - and we specifically disclaim - any warranty concerning suitability for a specific customer application or use. This Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by us with reference to the use of our products is given gratis, and we assume no obligation or liability for the advice given or results obtained.

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TOKIN PRODUCTS

Compliance to RoHS Directive

List of compliant products and restriction status of prohibited substances

Eco Products

Vol.12

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Proadlizer

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Chip Type/SMD		PF/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Production stoppage	
		PF/B	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Production stoppage	

Tantalum Capacitor

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Polymer Tantalum Capacitor NeoCapacitor	Chip type/SMD Polymer/Low ESR	PS/G	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Chip type/SMD Polymer/Standard	PS/L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		T52X/530	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	T520, T521, T523
		PS/K	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Chip type/SMD Polymer/High temperature	PS/H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Chip type/SMD Polymer/CB terminal	G/PS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Chip type/SMD Polymer/face down terminal	F/PS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Chip type/SMD Polymer/Automotive grade	PS/U	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		T59X	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	T591, T598
	Chip type/SMD Polymer/Automotive grade/face down terminal	F/PU	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Chip type/SMD Polymer/High reliability	T540/T541	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
Tantalum Capacitor	Chip type/SMD With fuse	SV/F	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	RoHS-NO	Production stoppage	
	Chip type/SMD High-performance product	SV/H	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	RoHS-NO	Production stoppage	
	Chip type/SMD Conventional	SV/S	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	RoHS-NO	Production stoppage	
		M/SV	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	RoHS-NO	Production stoppage	Compatible with SV/K series
		SV	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	RoHS-NO	Production stoppage	
		E/SV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Production stoppage	Compatible with SV/K series
		SV/K	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		T49x	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	T490、T491、T494、T495、T498
	Chip type/SMD CB terminal	G/SV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Production stoppage	
	Chip type/SMD Face down terminal	F/SV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Production stoppage	
	Chip type/SMD Low ESR	SV/Z	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Production stoppage	Compatible with SV/K series
	Resin coated exterior type/insert	DN	Y	Y	N	Y	Y	Y	Y	N	Y	Y	RoHS-NO	Production stoppage	
		DH/R	Y	Y	N	Y	Y	Y	Y	N	Y	Y	RoHS-NO	Production stoppage	
	With metal case/insert	H	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	RoHS-NO	Production stoppage	

Supercapacitor

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
SMD type	FC*****ZFTBR**	FC	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	Code "F" add after code "Z" of the conventional P.N.
	FCS*****ZFTBR**	FCS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
Resin-molded type	FM*****ZF(TP**)	FM	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Automotive Grade	FMD	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
Metal-can type	FA*****ZF	FA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	Code "F" add after code "Z" of the conventional P.N.
	FE*****ZF	FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	FG(*)*****ZF	FG	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	FR*****ZF	FR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

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Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
	FS*****ZF	FS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	Code "F" add after code "Z" of the conventional P.N.
	FT*****ZF	FT	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	FY*****ZF	FY	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Automotive Grade	FUOH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
Large capacitance type	HVZ*****NF	HVZ	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

Shape Memory Alloys

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Nickel titanium alloys	(Memoalloy®)	MAT	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		MUC	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

Permanent Magnets

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Sm-Co magnets	(Lanthanet®)	LM	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
Fe-Cr-Co magnets		KX-1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		KX-4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		K-5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

Ferrite Cores

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Ferrite Cores	High-B Compound	BH1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		BH2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		BH3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		BH5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		BH7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		B40	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		BH1T	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	High-μ Compound	5H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		7H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		10H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		12H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		S15H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

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Flex suppressor®

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
For Noise suppression	High Permeability type	EFX	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		EFX6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		EFW	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		FX2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		FX5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	UL94 V-0 Flame Retardant type	EFF	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		FF1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		EFF4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		EFA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		EFH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
	GHz band High Performance type	EFG	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		FG1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		EFG2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		EFG3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	SHF band type	EFS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		FS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
For RFID	High Magnetic Permeability & Low Magnetic Loss type	RM4A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		M4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

Power Inductors

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
SMD type	Shielded Type	SN-S3M	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Not for New Design	
		H.DI	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
	Open Type	SSB14	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SSB15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SSB44	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SSB64	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SSB84	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
DIP type	Shielded Type	SBPSC	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
	Open magnetic circuit	SBC1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SBC2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SBC3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SBC4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SBC6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SBC7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SBC8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SBC9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SBCP	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Troidal	OH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SHP	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
SMD type	Shielded Type	MPC	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		MPCG	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	

Continues on next page

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			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
SMD type	Shielded Type	MPCH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		MPCV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		MPLC	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		MPLCG	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		MPLCH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		MPLCV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		MPX	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		MPXV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		MPEV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		C.PI	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		TPI	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

Transformer for PLC

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
DIP type	PLT series	PLT-01	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		PLT-02	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

EMI Core

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Ring type	Troidal cores (bare type)	ESD-R	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Troidal cores (coated type)	ESD-R	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Troidal cores with case	ESD-R	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Troidal cores with snail-shaped case	ESD-R-B	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Cores suitable for a low frequency noise(High impedance type)	ESD-R-SR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Cores suitable for a low frequency noise(Large-size ring type)	ESD-R	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Cores suitable for a low frequency noise	ESD-R	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Toroidal cores with High Heat Resistance	ESD-R-H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Nanocrystal cores	ESD-R-H-NC23	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
Snap-on type	Snap-on cores for round cables	ESD-SR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		ESD-SR-S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Snap-on cores for round cables with High Resistance and Cable Holding Mechanism	ESD-SR-H/HL	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
Flat type	Hinged,non-hinged cores for round cables	ESD-FPL	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		ESD-FPD	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
Bead type	Bead cores	B-20	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

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DC Line Filters

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
DIP type	Common mode power line	SH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SHO	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Common mode signal line	SBT-01W	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		ESD-H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		D	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
	Common mode for telephone sets	ST	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Normal mode	SBT	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SNT	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Bead inductors (lead type)	B-01	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		B-02	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		B-03	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		B-06	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Bead inductors (winding type)	B	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
SMD type	Common mode power line	SBS9080	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Not for New Design	
		SBP	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
	Common mode signal line	M-500CT	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		M-600T	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Not for New Design	

AC Line Filters

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Lead type	Earth inductors	SNG	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
DIP type	Common mode	SCF-XV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCR-XV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCT-XV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SC	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SC-J	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SC-GJ	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SC-JV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SC-JS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SC-JH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SC-JKH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SC Three-phase	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SC-D	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SC-D-J/JH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SC-G/GS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCF	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCF-J/JH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCF Three-phase	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCR22	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCR25	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCR31	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

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Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
DIP type	Common mode	SCR38	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCR47	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCR Three-phase	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SCR-H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SS11V/H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SS11VL	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SS17HB	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SS17VA/HA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SS20H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SS21V	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SS24V/H-CH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SS26V	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SS28V/H-CH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SS30V	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SS35V/35H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SSB11V-R/11H-R	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSB28V/H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SSHB10H/HS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSHB21H/HS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSR10V/H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSR10VS/HS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSR21V/H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SSR21NV/NH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSR21NV-M/NH-M	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSR21NVS/NHS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSR21NVS-M/NHS-M	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSRH7H-M	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSRH7HS-M	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSRH24NH	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSRH24NHS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSRH24NV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SSRH24NVS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SU7VC	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SU9V/9H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SU9VF/9HF	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SU10VFC-R	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SU9HD	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SU9VD	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SU10VD	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SU16VD	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Nomal mode	SN	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SN-J	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SN-JA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

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Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
DIP type	Nomal mode	SN-JB	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SN-W	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SN-P1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SN-P2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		HHB	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		SHB	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Not for New Design	
		HHBC	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		SHBC	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		PHBC	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

Noise Filters

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Casing type	Metal box	LF series	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU(※)	Under mass production	※LF-202U-1, LF-202-9 are RoHS-PRC
		HFP series	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Not for New Design	
		GT series	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		GF series	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		Three-Phase GTX series	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
	Metal cylinder	VU series	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		VC series	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		RG series	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		VG series	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Production stoppage	
	Plastic box	MR series	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC(※)	Under mass production	※MR-2021, MR-2032 contain Pb. Status are RoHS-EU.
		MA series	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		Single-Phase GTX series	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
Inlet type		GL series	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC(※)	Under mass production	※GL-2**OH2,GL-2**OM contain Pb. Status are RoHS-EU.

Sensors

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Thermal sensors	Thermal guard OHD	OHD1/3/5R	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Thermal read switch TRS	TRS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		TRS-P	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
Current sensors	Current transformers low current type	CT-05/06/07	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Snap-on Type CT	C/CT	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
	Zero-phase current transformer ZCT	MR-1/2/3/4/1-P5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		MR-1-P5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
		MR/C-01	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	
	Magnetic direct current sensor	LA12	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		FG	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
	Magnetic type proximity switch	TMRS-3020/4001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	

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Pyroelectric infrared Sensor

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Piezo sensors	Pyroelectric infrared sensor	PL-N823-01	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		PL-Q873-02	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
	Lens for Pyroelectric infrared sensor	PL-001L-*	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	RoHS-PRC	Under mass production	*:-N/-W/-BK
	Pyroelectric infrared sensor module	SS-430	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		SS-430L-*	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	*:-N/-W/-BK
	Pyroelectric vibration sensor	VS-AV203/023	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		VS-BV203/021	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		VS-FV100	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		VS-JV10A	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	

Piezo materials

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Piezo materials	Langevin bolt-on transducers	NBL	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	

Multilayer Piezoelectric Actuators

Product Family	Product Type	Series Name	Restricted Substance										RoHS Status	Production Status	Remarks
			Cd <100ppm	Cr+6 <1000ppm	Pb <1000ppm	Hg <1000ppm	PBB <1000ppm	PBDE <1000ppm	DBP <1000ppm	DEHP <1000ppm	BBP <1000ppm	DIBP <1000ppm			
Multilayer Piezoelectric Actuators	Resin coated type	AE/AER	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		AL	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
	Metal sealed type	ASB	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		ASL	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
		AHB	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Under mass production	
	Piezoelectric acoustic module	R11-244018-01	Y	Y	E	Y	Y	Y	Y	Y	Y	Y	RoHS-EU	Not for New Design	

- The RoHS compliance means that we judge from Directive 2015/863/EU Amending 2011/65/EU that the products do not exceed maximum permissible levels for lead, cadmium, mercury, hexavalent chromium, PBB, PBDE, DEHP, BBP, DBP and DIBP except for regulated exemption use.
- This statement does not insure the compliance of any of the listed parts with any laws or legal imperatives developed by any EU members individually with regards to the RoHS Directive.
- The descriptions given in this catalogue are based on product information as of January 2023. Please contact us for information about our current products.
- This catalogue uses only representative series names for products. In order to ensure correct and safe product usage, please request a delivery specification sheet so you can confirm detailed product characteristics.
- Please note that these descriptions are subject to change without notification due to improvements or other reasons.
- Please contact TOKIN regarding custom-made products that are not listed here.

Precautions



- The RoHS compliance means that we judge from Directive 2015/863/EU Amending 2011/65/EU that the products do not exceed maximum permissible levels for lead, cadmium, mercury, hexavalent chromium, PBB, PBDE, DEHP, BBP, DBP and DIBP except for regulated exemption use.
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Overview

The KEMET Noise Suppression Sheet FLEX SUPPRESSOR is effectively designed for high frequency noise that is generated from the electronic devices. The flexible sheet is a polymer base, blended with micron-sized magnetic powders dispersed throughout the material. These sheets are effective for electromagnetic wave and resonance suppression, and can be cut into a variety of shapes and sizes.

Applications

- Radiation noise suppression for electronic equipment, especially mobile phone, display, digital still camera, digital video camera, notebook PC and tablet, car infortainment
- Quasi-microwave range interference prevention inside and in-between electronics, desense in FM radio, digital TV, LTE, GPS, Wi-Fi, Bluetooth and optical transceiver
- Electro static discharge (ESD) countermeasure
- Enhanced wireless power transfer

Benefits

- Electromagnetic wave suppression – the electromagnetic wave enters through the sheet and is suppressed by losing its magnetic structure
- Resonance suppression – controls the high frequency current and suppresses unwanted electromagnetic resonance by creating impedance
- Wide range of frequencies available from MHz band to GHz band
- Thin, flexible material used in portable equipment
- Virtually no limitation to where it can be used
- Less time required for installation
- Easily cut into any shape
- RoHS compliant and halogen-free
- AEC-Q200 (FF1 and EFF4)
- Available in SHF band (EFS)

Sheet Type



Roll Type

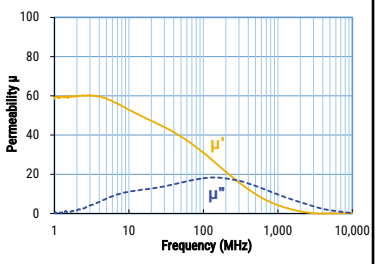
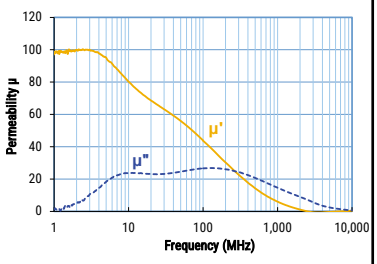
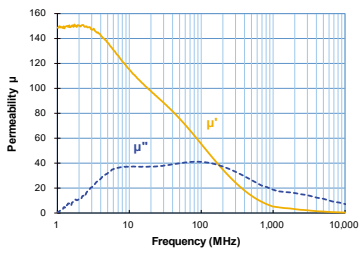
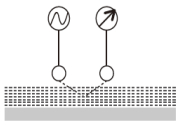
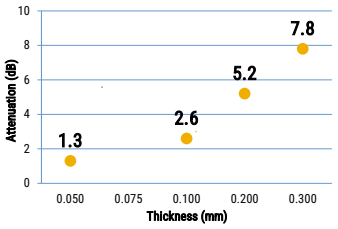
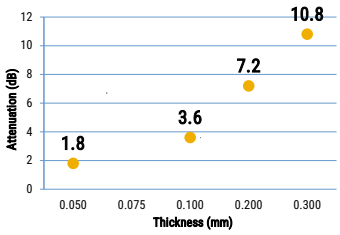
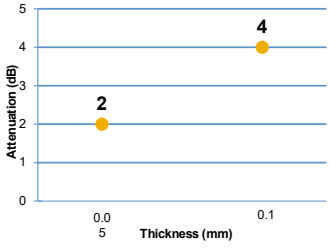


Part Number System

EFF4	(01)-	240X240	T0800
Series	Thickness	Standard Dimensions	Adhesive Tape Thickness
EFA EFF* EFF4 EFG* EFG2 EFG3 EFH* EFR* EFS EFW EFX* EFX6 FF1 FF150 FG1 FG2 FS FW5 FX5	(003) = 0.03 mm* (005) = 0.05 mm (007) =0.07 mm* (01) = 0.1 mm (02) = 0.2 mm (03) = 0.3 mm (05) = 0.5 mm (10) = 1.0 mm (25) = 0.025 mm (50) = 0.05 mm (75) = 0.075 mm (100) = 0.1 mm (200) = 0.2 mm (300) = 0.3 mm	80X80 = Sheet 80 mm x 80 mm 120X120 = Sheet 120 mm x 120 mm 240X80 = Sheet 240 mm x 80 mm 240X240 = Sheet 240 mm x 240 mm 240X10M = Roll 240 mm x 10 m 240X20M = Roll 240 mm x 20 m 240X30M = Roll 240 mm x 30 m 240X50M = Roll 240 mm x 50 m	T0800 = 0.03 mm T1500 = 0.14 mm* T2200 = 0.05 mm* T2900 = 0.01 mm Blank = No adhesive tape

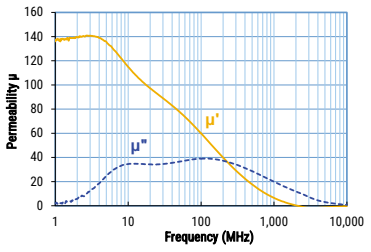
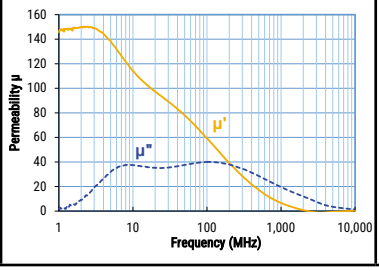
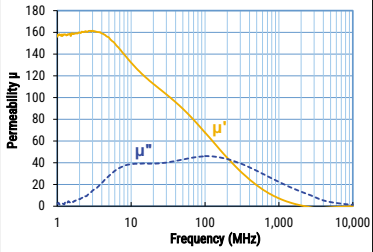
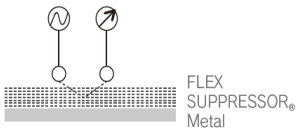
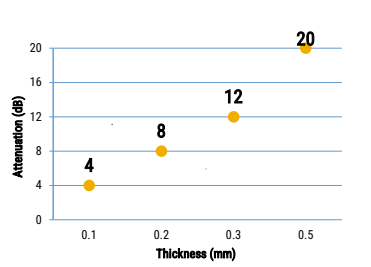
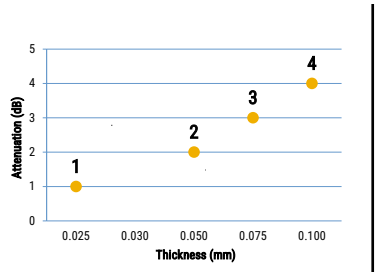
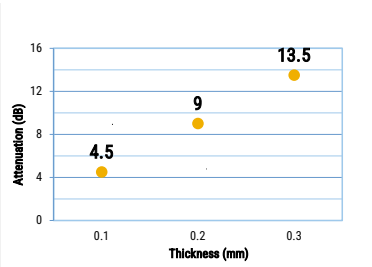
** Not for new design.*

Specifications - UL94 V-0 Flame Retardant Type

Features		UL94 V-0 Flame Retardant Type		
Series		EFA	FF1	FF150
Effective Frequency		1 MHz to 3 GHz		
Operating Temperature (°C)		−40 to +105	−40 to +125	
Thickness (mm)		0.05/0.1/0.2/0.3	0.05/0.1/0.2/0.3	0.05/0.1
Standard Dimensions (mm)		240 X 240 (Roll on request)		
Permeability (μ)		60 typical, at 3 MHz	100 typical, at 3 MHz	150 typical, at 3 MHz
				
Decoupling Characteristics		at 700 MHz	at 700 MHz	at 700 MHz
				
Specific Gravity[1]		3.1 typical	3.1 typical	3.2 typical
Thermal Conductivity		1.27 typical	1.36 typical	1.79 typical
Surface Resistivity (Ω/sq.)		1.0 X 10^6 typical		
Approved Standard		UL94 V-0 UL File No. E176124		
Environment	RoHS	Compliant		
	Halogen	Free		
	PVC	Free		
	Lead	Free		
	Red Phosphorus	Free	–	Free
Reflow Temperature (°C)		Up to 260°C, special double-sided adhesive tape required, available upon request.		

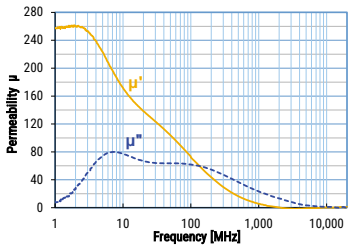
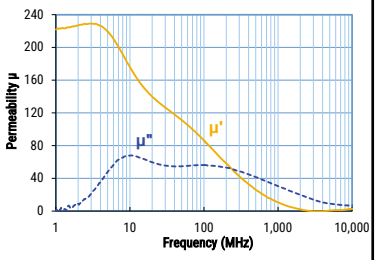
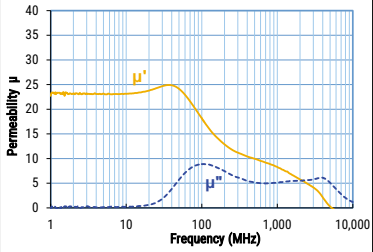
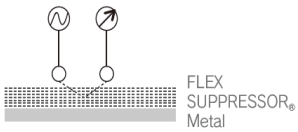
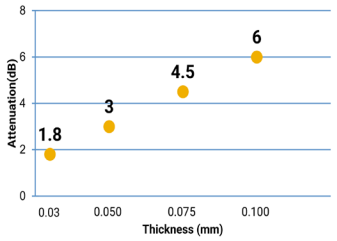
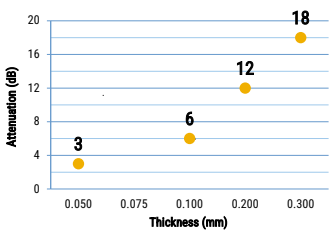
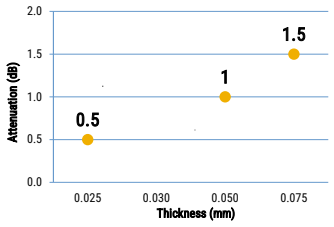
[1] Value in 23°C atmosphere.
Above specifications are for the FLEX SUPPRESSOR only (adhesives, etc., not included.)

Specifications - High Permeability Type

Features		UL94 V-0 Flame Retardant Type	High Permeability Type	
Series		EFF4	FX5	EFX6
Effective Frequency		1 MHz to 3 GHz		
Operating Temperature (°C)		−40 to +125	−40 to +105	
Thickness (mm)		0.1/0.2/0.3/0.5	0.025/0.05/0.075/0.1	0.1/0.2/0.3
Standard Dimensions (mm)		240 X 240	240 X 240 (Roll on request)	240 X 240
Permeability (μ)		140 typical, at 3 MHz	150 typical, at 3 MHz	160 typical, at 3 MHz
				
Decoupling Characteristics		at 700 MHz		
				
Specific Gravity[1]		3.7 typical	3.3 typical	3.8 typical
Thermal Conductivity		1.52 typical	1.10 typical	1.35 typical
Surface Resistivity (Ω/sq.)		1.0 X 10^6 typical		
Approved Standard		UL94 V-0 UL File No. E176124	UL94 HB UL File No. E176124	
Environment	RoHS	Compliant		
	Halogen	Free		
	PVC	Free		
	Lead	Free		
	Red Phosphorus	–	Free	
Reflow Temperature (°C)		Up to 260°C, special double-sided adhesive tape required, available upon request.		–

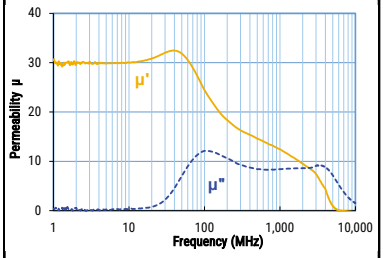
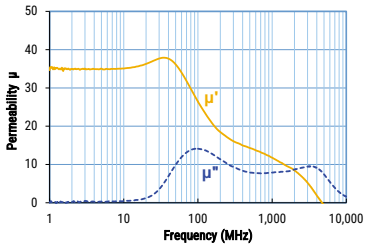
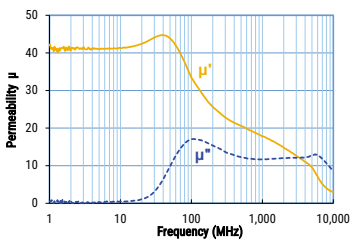
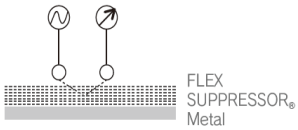
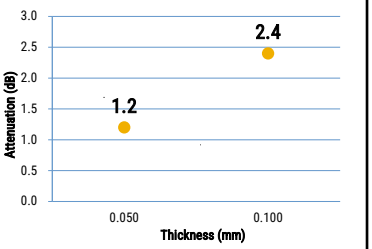
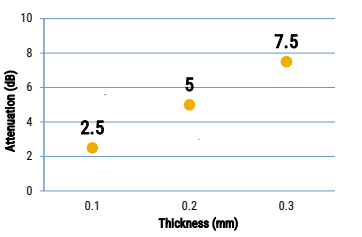
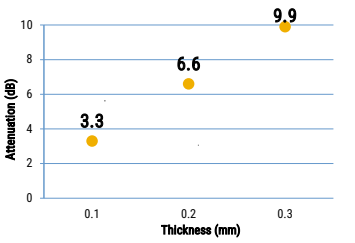
[1] Value in 23°C atmosphere.
Above specifications are for the FLEX SUPPRESSOR only (adhesives, etc., not included.)

Specifications - High Permeability and GHz Band High Performance Type

Features		High Permeability Type		GHz Band High Performance Type
Series		FW5	EFW	FG1
Effective Frequency		1 MHz to 3 GHz		1 GHz to 10 GHz
Operating Temperature (°C)		−40 to +105		
Thickness (mm)		0.03/0.05/0.075/0.1	0.05/0.1/0.2/0.3	0.025/0.05/0.075
Standard Dimensions (mm)		240 X 240 (Roll on request)	240 X 240	240 X 240 (Roll on request)
Permeability (μ)		250 typical, at 3 MHz	230 typical, at 3 MHz	25 typical, at 3 MHz
				
Decoupling Characteristics		at 700 MHz		at 2.4 GHz
					
Specific Gravity[1]		3.6 typical	4.0 typical	3.1 typical
Thermal Conductivity		1.55 typical	1.27 typical	0.94 typical
Surface Resistivity (Ω/sq.)		1.0 X 10^6 typical		1.0 X 10^6 typical
Approved Standard		–	UL94 HB UL File No. E176124	UL94 HB UL File No. E176124
Environment	RoHS	Compliant		
	Halogen	Free		
	PVC	Free		
	Lead	Free		
	Red Phosphorus	Free		
Reflow Temperature (°C)		Up to 260°C, special double-sided adhesive tape required, available upon request.		

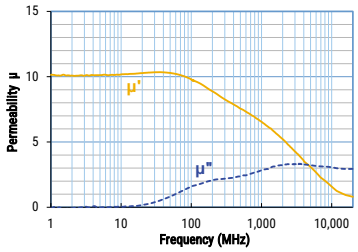
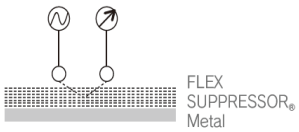
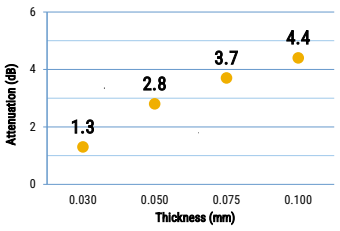
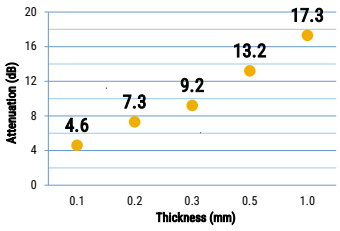
[1] *Value in 23°C atmosphere.*
Above specifications are for the FLEX SUPPRESSOR only (adhesives, etc., not included.)

Specifications - GHz Band High Performance Type and Super High Frequency Type

Features		GHz Band High Performance Type		
Series		FG2	EFG2	EFG3
Effective Frequency		1 GHz to 10 GHz		
Operating Temperature (°C)		−40 to +105		
Thickness (mm)		0.05/0.1	0.1/0.2/0.3	
Standard Dimensions (mm)		240 X 240 (Roll on request)	240 X 240	
Permeability (μ)		30 typical, at 3 MHz	35 typical, at 3 MHz	42 typical, at 3 MHz
				
Decoupling Characteristics		at 2.4 GHz		
					
Specific Gravity[1]		3.3 typical	3.9 typical	4.1 typical
Thermal Conductivity		1.12 typical	1.05 typical	1.43 typical
Surface Resistivity (Ω/sq.)		1.0 X 10^8 typical	1.0 X 10^6 typical	
Approved Standard		UL94 HB UL File No. E176124		
Environment	RoHS	Compliant		
	Halogen	Free		
	PVC	Free		
	Lead	Free		
	Red Phosphorus	Free		
Reflow Temperature (°C)		Up to 260°C, special double-sided adhesive tape required, available upon request.		

[1] Value in 23°C atmosphere.
Above specifications are for the FLEX SUPPRESSOR only (adhesives, etc., not included.)

Specifications - GHz Band High Performance Type and Super High Frequency Type

Features		Super High Frequency Type	
Series		FS	EFS
Effective Frequency		3 GHz to 40 GHz	
Operating Temperature (°C)		−40 to +105	
Thickness (mm)		0.03/0.05/0.075/0.1	0.1/0.2/0.3/0.5/1.0
Standard Dimensions (mm)		240 X 240 (Roll on request)	240 X 240
Permeability (μ)		10 typical, at 10 MHz	
			
Decoupling Characteristics		at 10 GHz	at 10 GHz
				
Specific Gravity[1]		4.5 typical	
Thermal Conductivity		1.17 typical	1.23 typical
Surface Resistivity (Ω/sq.)		1.0 X 10^8 typical	
Approved Standard		UL94 V-0 UL File No. E176124	
Environment	RoHS	Compliant	
	Halogen	Free	
	PVC	Free	
	Lead	Free	
	Red Phosphorus	Free	
Reflow Temperature (°C)		Up to 260°C, special double-sided adhesive tape required, available upon request.	

[1] Value in 23°C atmosphere.
Above specifications are for the FLEX SUPPRESSOR only (adhesives, etc., not included.)

Specifications - Not for New Design

Features		Standard Specifications	High Magnetic Permeability Type	Extra High Magnetic Permeability Type	High Frequency	High Temperature Reflow
Series		EFR	EFX	EFF	EFG	EFH
Effective Frequency		Up to 10 GHz				
Operating Temperature (°C)		−40 to +105				
Thickness (mm)		0.05/0.1/0.2/0.3/0.5/1.0	0.05/0.1/0.2/0.3/0.5	0.07/0.1/0.2/0.3	0.05/0.1/0.2/0.3	0.05/0.1
Standard Dimensions (mm)		240 x 240				
Specific Gravity[1]		2.8 typical	3.2 typical	3.6 typical	3.0 typical	3.1 typical
Tensile Strength (Mpa)		3.6 minimum	6.8 minimum	6.9 minimum	3.5 minimum	6.8 minimum
Surface Resistivity (Ω/sq.)		1.0 x 10^7 typical	1.0 x 10^6 typical	1.0 x 10^6 typical	1.0 x 10^6 typical	1.0 x 10^7 typical
Thermal Conductivity (W/m K)		0.22	0.22	0.4	0.22	1.3
Approved Standard		UL 94 V-0	UL 94 HB	UL 94 V-0	UL 94 V-1	UL 94 V-0
		UL File No. E176124				
Environment	RoHS	Compliant				
	Halogen	Free				
	PVC	Free				
	Lead	Free				
	Red Phosphorus	–	Free	–	–	Free
Relative Magnetic Permeability (at 3MHz)		60 typical	100 typical	130 typical	20 typical	60 typical
Remarks		60 μ high permeability, various thickness flame retardant (UL 94 V-0 certified)	100 μ high permeability, various thickness	Industry's highest magnetic permeability of 130 μ with halogen free composition. Flame retardant (UL 94 V-0 certified)	Excellent suppression of high frequency noise in Wi-Fi and higher bandwidths.	Can be mounted before reflowing

[1] Value in 23°C atmosphere.
Above specifications are for the FLEX SUPPRESSOR only (adhesives, etc., not included.)

Table 1A – Ratings & Part Number Reference

Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight
		mm	mm	μ	Typical	Ω/sq. typical	g
EFA(005)-120X120T0800	EFA	0.05	0.03	60	3.1	1.0 X 10^6	2.83
EFA(005)-240X10M	EFA	0.05	--	60	3.1	1.0 X 10^6	403.00
EFA(005)-240X10MT0800	EFA	0.05	0.03	60	3.1	1.0 X 10^6	498.96
EFA(005)-240X240T0800	EFA	0.05	0.03	60	3.1	1.0 X 10^6	9.81
EFA(005)-240X50M	EFA	0.05	--	60	3.1	1.0 X 10^6	1,860.00
EFA(005)-240X50MT0800	EFA	0.05	0.03	60	3.1	1.0 X 10^6	2,042.40
EFA(005)-240X80T0800	EFA	0.05	0.03	60	3.1	1.0 X 10^6	3.77
EFA(005)-80X80T0800	EFA	0.05	0.03	60	3.1	1.0 X 10^6	1.26
EFA(01)-120X120T0800	EFA	0.1	0.03	60	3.1	1.0 X 10^6	5.05
EFA(01)-240X10M	EFA	0.1	--	60	3.1	1.0 X 10^6	806.40
EFA(01)-240X10MT0800	EFA	0.1	0.03	60	3.1	1.0 X 10^6	902.16
EFA(01)-240X240T0800	EFA	0.1	0.03	60	3.1	1.0 X 10^6	18.74
EFA(01)-240X50M	EFA	0.1	--	60	3.1	1.0 X 10^6	3,720.00
EFA(01)-240X50MT0800	EFA	0.1	0.03	60	3.1	1.0 X 10^6	3,902.40
EFA(01)-240X80T0800	EFA	0.1	0.03	60	3.1	1.0 X 10^6	6.73
EFA(01)-80X80T0800	EFA	0.1	0.03	60	3.1	1.0 X 10^6	2.24
EFA(02)-120X120T0800	EFA	0.2	0.03	60	3.1	1.0 X 10^6	9.53
EFA(02)-240X10M	EFA	0.2	--	60	3.1	1.0 X 10^6	1,612.80
EFA(02)-240X10MT0800	EFA	0.2	0.03	60	3.1	1.0 X 10^6	1,708.56
EFA(02)-240X240	EFA	0.2	--	60	3.1	1.0 X 10^6	35.72
EFA(02)-240X240T0800	EFA	0.2	0.03	60	3.1	1.0 X 10^6	36.59
EFA(02)-240X30M	EFA	0.2	--	60	3.1	1.0 X 10^6	4,464.00
EFA(02)-240X30MT0800	EFA	0.2	0.03	60	3.1	1.0 X 10^6	4,573.44
EFA(02)-240X80T0800	EFA	0.2	0.03	60	3.1	1.0 X 10^6	12.70
EFA(02)-80X80T0800	EFA	0.2	0.03	60	3.1	1.0 X 10^6	4.23
EFA(03)-120X120T0800	EFA	0.3	0.03	60	3.1	1.0 X 10^6	13.98
EFA(03)-240X10M	EFA	0.3	--	60	3.1	1.0 X 10^6	2,419.20
EFA(03)-240X10MT0800	EFA	0.3	0.03	60	3.1	1.0 X 10^6	2,514.96
EFA(03)-240X20M	EFA	0.3	--	60	3.1	1.0 X 10^6	4,464.00
EFA(03)-240X20MT0800	EFA	0.3	0.03	60	3.1	1.0 X 10^6	4,536.96
EFA(03)-240X240	EFA	0.3	--	60	3.1	1.0 X 10^6	53.57
EFA(03)-240X240T0800	EFA	0.3	0.03	60	3.1	1.0 X 10^6	54.45
EFA(03)-240X80T0800	EFA	0.3	0.03	60	3.1	1.0 X 10^6	18.63
EFA(03)-80X80T0800	EFA	0.3	0.03	60	3.1	1.0 X 10^6	6.21
		mm	mm	μ	Typical	Ω/sq. typical	g
Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight

[1] Permeability at 10 MHz.

Table 1A – Ratings & Part Number Reference cont.

Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight
		mm	mm	μ	Typical	Ω/sq. typical	g
EFF4(01)-120X120T0800	EFF4	0.1	0.03	140	3.7	1.0 X 10^6	5.92
EFF4(01)-240X240T0800	EFF4	0.1	0.03	140	3.7	1.0 X 10^6	23.66
EFF4(01)-240X80T0800	EFF4	0.1	0.03	140	3.7	1.0 X 10^6	7.89
EFF4(01)-80X80T0800	EFF4	0.1	0.03	140	3.7	1.0 X 10^6	2.63
EFF4(02)-120X120T0800	EFF4	0.2	0.03	140	3.7	1.0 X 10^6	11.24
EFF4(02)-240X240	EFF4	0.2	--	140	3.7	1.0 X 10^6	42.63
EFF4(02)-240X240T0800	EFF4	0.2	0.03	140	3.7	1.0 X 10^6	44.97
EFF4(02)-240X80T0800	EFF4	0.2	0.03	140	3.7	1.0 X 10^6	14.99
EFF4(02)-80X80T0800	EFF4	0.2	0.03	140	3.7	1.0 X 10^6	5.00
EFF4(03)-120X120T0800	EFF4	0.3	0.03	140	3.7	1.0 X 10^6	16.57
EFF4(03)-240X240	EFF4	0.3	--	140	3.7	1.0 X 10^6	63.94
EFF4(03)-240X240T0800	EFF4	0.3	0.03	140	3.7	1.0 X 10^6	66.28
EFF4(03)-240X80T0800	EFF4	0.3	0.03	140	3.7	1.0 X 10^6	22.09
EFF4(03)-80X80T0800	EFF4	0.3	0.03	140	3.7	1.0 X 10^6	7.36
EFF4(05)-120X120T0800	EFF4	0.5	0.03	140	3.7	1.0 X 10^6	27.23
EFF4(05)-240X240	EFF4	0.5	--	140	3.7	1.0 X 10^6	106.56
EFF4(05)-240X240T0800	EFF4	0.5	0.03	140	3.7	1.0 X 10^6	108.90
EFF4(05)-240X80T0800	EFF4	0.5	0.03	140	3.7	1.0 X 10^6	36.30
EFF4(05)-80X80T0800	EFF4	0.5	0.03	140	3.7	1.0 X 10^6	12.10
EFG2(01)-120X120T0800	EFG2	0.1	0.03	35	3.9	1.0 X 10^6	5.82
EFG2(01)-240X240T0800	EFG2	0.1	0.03	35	3.9	1.0 X 10^6	23.27
EFG2(01)-240X80T0800	EFG2	0.1	0.03	35	3.9	1.0 X 10^6	7.76
EFG2(01)-80X80T0800	EFG2	0.1	0.03	35	3.9	1.0 X 10^6	2.59
EFG2(02)-120X120T0800	EFG2	0.2	0.03	35	3.9	1.0 X 10^6	11.44
EFG2(02)-240X240	EFG2	0.2	--	35	3.9	1.0 X 10^6	44.93
EFG2(02)-240X240T0800	EFG2	0.2	0.03	35	3.9	1.0 X 10^6	45.74
EFG2(02)-240X80T0800	EFG2	0.2	0.03	35	3.9	1.0 X 10^6	15.25
EFG2(02)-80X80T0800	EFG2	0.2	0.03	35	3.9	1.0 X 10^6	5.08
EFG2(03)-120X120T0800	EFG2	0.3	0.03	35	3.9	1.0 X 10^6	17.05
EFG2(03)-240X240	EFG2	0.3	--	35	3.9	1.0 X 10^6	67.40
EFG2(03)-240X240T0800	EFG2	0.3	0.03	35	3.9	1.0 X 10^6	68.20
EFG2(03)-240X80T0800	EFG2	0.3	0.03	35	3.9	1.0 X 10^6	22.73
EFG2(03)-80X80T0800	EFG2	0.3	0.03	35	3.9	1.0 X 10^6	7.58
		mm	mm	μ	Typical	Ω/sq. typical	g
Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight

[1] Permeability at 10 MHz.

Table 1A – Ratings & Part Number Reference cont.

Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight
		mm	mm	μ	Typical	Ω/sq. typical	g
EFG3(01)-120X120T0800	EFG3	0.1	0.03	42	4.1	1.0 X 10^6	7.89
EFG3(01)-240X240T0800	EFG3	0.1	0.03	42	4.1	1.0 X 10^6	31.57
EFG3(01)-240X80T0800	EFG3	0.1	0.03	42	4.1	1.0 X 10^6	10.52
EFG3(01)-80X80T0800	EFG3	0.1	0.03	42	4.1	1.0 X 10^6	3.51
EFG3(02)-120X120T0800	EFG3	0.2	0.03	42	4.1	1.0 X 10^6	13.65
EFG3(02)-240X240	EFG3	0.2	--	42	4.1	1.0 X 10^6	46.08
EFG3(02)-240X240T0800	EFG3	0.2	0.03	42	4.1	1.0 X 10^6	54.61
EFG3(02)-240X80T0800	EFG3	0.2	0.03	42	4.1	1.0 X 10^6	18.20
EFG3(02)-80X80T0800	EFG3	0.2	0.03	42	4.1	1.0 X 10^6	6.07
EFG3(03)-120X120T0800	EFG3	0.3	0.03	42	4.1	1.0 X 10^6	19.41
EFG3(03)-240X240	EFG3	0.3	--	42	4.1	1.0 X 10^6	69.12
EFG3(03)-240X240T0800	EFG3	0.3	0.03	42	4.1	1.0 X 10^6	77.65
EFG3(03)-240X80T0800	EFG3	0.3	0.03	42	4.1	1.0 X 10^6	25.88
EFG3(03)-80X80T0800	EFG3	0.3	0.03	42	4.1	1.0 X 10^6	8.63
EFS(01)-120X120T0800	EFS	0.1	0.03	10 [1]	4.5	1.0 X 10^8	8.50
EFS(01)-240X240T0800	EFS	0.1	0.03	10 [1]	4.5	1.0 X 10^8	34.00
EFS(01)-240X80T0800	EFS	0.1	0.03	10 [1]	4.5	1.0 X 10^8	11.30
EFS(01)-80X80T0800	EFS	0.1	0.03	10 [1]	4.5	1.0 X 10^8	3.80
EFS(02)-120X120T0800	EFS	0.2	0.03	10 [1]	4.5	1.0 X 10^8	14.80
EFS(02)-240X240	EFS	0.2	--	10 [1]	4.5	1.0 X 10^8	50.10
EFS(02)-240X240T0800	EFS	0.2	0.03	10 [1]	4.5	1.0 X 10^8	59.10
EFS(02)-240X80T0800	EFS	0.2	0.03	10 [1]	4.5	1.0 X 10^8	19.70
EFS(02)-80X80T0800	EFS	0.2	0.03	10 [1]	4.5	1.0 X 10^8	6.60
EFS(03)-120X120T0800	EFS	0.3	0.03	10 [1]	4.5	1.0 X 10^8	21.00
EFS(03)-240X240	EFS	0.3	--	10 [1]	4.5	1.0 X 10^8	75.10
EFS(03)-240X240T0800	EFS	0.3	0.03	10 [1]	4.5	1.0 X 10^8	84.10
EFS(03)-240X80T0800	EFS	0.3	0.03	10 [1]	4.5	1.0 X 10^8	28.00
EFS(03)-80X80T0800	EFS	0.3	0.03	10 [1]	4.5	1.0 X 10^8	9.30
EFS(05)-120X120T0800	EFS	0.5	0.03	10 [1]	4.5	1.0 X 10^8	33.50
EFS(05)-240X240	EFS	0.5	--	10 [1]	4.5	1.0 X 10^8	125.10
EFS(05)-240X240T0800	EFS	0.5	0.03	10 [1]	4.5	1.0 X 10^8	134.20
EFS(05)-240X80T0800	EFS	0.5	0.03	10 [1]	4.5	1.0 X 10^8	44.70
EFS(05)-80X80T0800	EFS	0.5	0.03	10 [1]	4.5	1.0 X 10^8	14.90
EFS(10)-120X120T0800	EFS	1.0	0.03	10 [1]	4.5	1.0 X 10^8	64.80
EFS(10)-240X240	EFS	1.0	--	10 [1]	4.5	1.0 X 10^8	250.30
		mm	mm	μ	Typical	Ω/sq. typical	g
Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight

[1] Permeability at 10 MHz.

Table 1A – Ratings & Part Number Reference cont.

Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight
		mm	mm	μ	Typical	Ω/sq. typical	g
EFS(10)-240X240T0800	EFS	1.0	0.03	10 [1]	4.5	1.0 X 10^8	259.30
EFS(10)-240X80T0800	EFS	1.0	0.03	10 [1]	4.5	1.0 X 10^8	86.40
EFS(10)-80X80T0800	EFS	1.0	0.03	10 [1]	4.5	1.0 X 10^8	28.80
EFW(005)-120X120T0800	EFW	0.05	0.03	230	4.0	1.0 X 10^6	4.87
EFW(005)-240X240T0800	EFW	0.05	0.03	230	4.0	1.0 X 10^6	19.47
EFW(005)-240X80T0800	EFW	0.05	0.03	230	4.0	1.0 X 10^6	6.49
EFW(005)-80X80T0800	EFW	0.05	0.03	230	4.0	1.0 X 10^6	2.16
EFW(01)-120X120T0800	EFW	0.1	0.03	230	4.0	1.0 X 10^6	7.60
EFW(01)-240X240T0800	EFW	0.1	0.03	230	4.0	1.0 X 10^6	30.42
EFW(01)-240X80T0800	EFW	0.1	0.03	230	4.0	1.0 X 10^6	10.14
EFW(01)-80X80T0800	EFW	0.1	0.03	230	4.0	1.0 X 10^6	3.38
EFW(02)-120X120T0800	EFW	0.2	0.03	230	4.0	1.0 X 10^6	13.08
EFW(02)-240X240	EFW	0.2	--	230	4.0	1.0 X 10^6	43.78
EFW(02)-240X240T0800	EFW	0.2	0.03	230	4.0	1.0 X 10^6	52.31
EFW(02)-240X80T0800	EFW	0.2	0.03	230	4.0	1.0 X 10^6	17.44
EFW(02)-80X80T0800	EFW	0.2	0.03	230	4.0	1.0 X 10^6	5.81
EFW(03)-120X120T0800	EFW	0.3	0.03	230	4.0	1.0 X 10^6	18.55
EFW(03)-240X240	EFW	0.3	--	230	4.0	1.0 X 10^6	65.66
EFW(03)-240X240T0800	EFW	0.3	0.03	230	4.0	1.0 X 10^6	74.19
EFW(03)-240X80T0800	EFW	0.3	0.03	230	4.0	1.0 X 10^6	24.73
EFW(03)-80X80T0800	EFW	0.3	0.03	230	4.0	1.0 X 10^6	8.24
EFX6(01)-120X120T0800	EFX6	0.1	0.03	160	3.8	1.0 X 10^6	5.69
EFX6(01)-240X240T0800	EFX6	0.1	0.03	160	3.8	1.0 X 10^6	22.77
EFX6(01)-240X80T0800	EFX6	0.1	0.03	160	3.8	1.0 X 10^6	7.59
EFX6(01)-80X80T0800	EFX6	0.1	0.03	160	3.8	1.0 X 10^6	2.53
EFX6(02)-120X120T0800	EFX6	0.2	0.03	160	3.8	1.0 X 10^6	11.17
EFX6(02)-240X240	EFX6	0.2	--	160	3.8	1.0 X 10^6	43.78
EFX6(02)-240X240T0800	EFX6	0.2	0.03	160	3.8	1.0 X 10^6	44.66
EFX6(02)-240X80T0800	EFX6	0.2	0.03	160	3.8	1.0 X 10^6	14.89
EFX6(02)-80X80T0800	EFX6	0.2	0.03	160	3.8	1.0 X 10^6	4.96
EFX6(03)-120X120T0800	EFX6	0.3	0.03	160	3.8	1.0 X 10^6	16.64
EFX6(03)-240X240	EFX6	0.3	--	160	3.8	1.0 X 10^6	65.67
EFX6(03)-240X240T0800	EFX6	0.3	0.03	160	3.8	1.0 X 10^6	66.54
EFX6(03)-240X80T0800	EFX6	0.3	0.03	160	3.8	1.0 X 10^6	22.18
EFX6(03)-80X80T0800	EFX6	0.3	0.03	160	3.8	1.0 X 10^6	7.39
		mm	mm	μ	Typical	Ω/sq. typical	g
Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight

[1] Permeability at 10 MHz.

Table 1A – Ratings & Part Number Reference cont.

Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight
		mm	mm	μ	Typical	Ω/sq. typical	g
FF1(100)-120X120T0800	FF1	0.1	0.03	100	3.1	1.0 X 10^6	4.69
FF1(100)-240X10M	FF1	0.1	--	100	3.1	1.0 X 10^6	781.20
FF1(100)-240X10MT0800	FF1	0.1	0.03	100	3.1	1.0 X 10^6	876.96
FF1(100)-240X240T0800	FF1	0.1	0.03	100	3.1	1.0 X 10^6	18.74
FF1(100)-240X50M	FF1	0.1	--	100	3.1	1.0 X 10^6	3,720.00
FF1(100)-240X50MT0800	FF1	0.1	0.03	100	3.1	1.0 X 10^6	3,902.40
FF1(100)-240X80T0800	FF1	0.1	0.03	100	3.1	1.0 X 10^6	6.25
FF1(100)-80X80T0800	FF1	0.1	0.03	100	3.1	1.0 X 10^6	2.08
FF1(200)-120X120T0800	FF1	0.2	0.03	100	3.1	1.0 X 10^6	9.15
FF1(200)-240X10M	FF1	0.2	--	100	3.1	1.0 X 10^6	1,562.40
FF1(200)-240X10MT0800	FF1	0.2	0.03	100	3.1	1.0 X 10^6	1,658.16
FF1(200)-240X240	FF1	0.2	--	100	3.1	1.0 X 10^6	35.72
FF1(200)-240X240T0800	FF1	0.2	0.03	100	3.1	1.0 X 10^6	36.59
FF1(200)-240X30M	FF1	0.2	--	100	3.1	1.0 X 10^6	4,464.00
FF1(200)-240X30MT0800	FF1	0.2	0.03	100	3.1	1.0 X 10^6	4,573.44
FF1(200)-240X80T0800	FF1	0.2	0.03	100	3.1	1.0 X 10^6	12.20
FF1(200)-80X80T0800	FF1	0.2	0.03	100	3.1	1.0 X 10^6	4.07
FF1(300)-120X120T0800	FF1	0.3	0.03	100	3.1	1.0 X 10^6	13.61
FF1(300)-240X10M	FF1	0.3	--	100	3.1	1.0 X 10^6	2,343.60
FF1(300)-240X10MT0800	FF1	0.3	0.03	100	3.1	1.0 X 10^6	2,439.36
FF1(300)-240X20M	FF1	0.3	--	100	3.1	1.0 X 10^6	4,464.00
FF1(300)-240X20MT0800	FF1	0.3	0.03	100	3.1	1.0 X 10^6	4,536.96
FF1(300)-240X240	FF1	0.3	--	100	3.1	1.0 X 10^6	53.57
FF1(300)-240X240T0800	FF1	0.3	0.03	100	3.1	1.0 X 10^6	54.45
FF1(300)-240X80T0800	FF1	0.3	0.03	100	3.1	1.0 X 10^6	18.15
FF1(300)-80X80T0800	FF1	0.3	0.03	100	3.1	1.0 X 10^6	6.05
FF1(50)-120X120T0800	FF1	0.05	0.03	100	3.1	1.0 X 10^6	2.45
FF1(50)-240X10M	FF1	0.05	--	100	3.1	1.0 X 10^6	390.60
FF1(50)-240X10MT0800	FF1	0.05	0.03	100	3.1	1.0 X 10^6	486.36
FF1(50)-240X240T0800	FF1	0.05	0.03	100	3.1	1.0 X 10^6	9.81
FF1(50)-240X50M	FF1	0.05	--	100	3.1	1.0 X 10^6	1,860.00
FF1(50)-240X50MT0800	FF1	0.05	0.03	100	3.1	1.0 X 10^6	2,042.40
FF1(50)-240X80T0800	FF1	0.05	0.03	100	3.1	1.0 X 10^6	3.27
		mm	mm	μ	Typical	Ω/sq. typical	g
Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight

[1] Permeability at 10 MHz.

Table 1A – Ratings & Part Number Reference cont.

Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight
		mm	mm	μ	Typical	Ω/sq. typical	g
FF1(50)-80X80T0800	FF1	0.05	0.03	100	3.1	1.0 X 10^6	1.09
FF150(50)-80X80T0800	F150	0.05	0.03	150	3.2	1.0 X 106	1.15
FF150(50)-240X80T0800	F150	0.05	0.03	150	3.2	1.0 X 106	3.46
FF150(50)-240X50MT0800	F150	0.05	0.03	150	3.2	1.0 X 106	2,162.40
FF150(50)-240X50M	F150	0.05	--	150	3.2	1.0 X 106	1,980.00
FF150(50)-240X240T0800	F150	0.05	0.03	150	3.2	1.0 X 106	10.39
FF150(50)-240X10MT0800	F150	0.05	0.03	150	3.2	1.0 X 106	510.36
FF150(50)-240X10M	F150	0.05	--	150	3.2	1.0 X 106	414.60
FF150(50)-120X120T0800	F150	0.05	0.03	150	3.2	1.0 X 106	2.59
FF150(100)-80X80T0800	F150	0.1	0.03	150	3.2	1.0 X 106	2.14
FF150(100)-240X80T0800	F150	0.1	0.03	150	3.2	1.0 X 106	6.44
FF150(100)-240X50MT0800	F150	0.1	0.03	150	3.2	1.0 X 106	4,022.40
FF150(100)-240X50M	F150	0.1	--	150	3.2	1.0 X 106	3,840.00
FF150(100)-240X240T0800	F150	0.1	0.03	150	3.2	1.0 X 106	19.32
FF150(100)-240X10MT0800	F150	0.1	0.03	150	3.2	1.0 X 106	900.96
FF150(100)-240X10M	F150	0.1	--	150	3.2	1.0 X 106	805.20
FF150(100)-120X120T0800	F150	0.1	0.03	150	3.2	1.0 X 106	4.83
FG1(25)-120X120T2900	FG1	0.025	0.01	25	3.1	1.0 X 10^6	2.67
FG1(25)-240X10M	FG1	0.025	--	25	3.1	1.0 X 10^6	195.30
FG1(25)-240X10MT2900	FG1	0.025	0.01	25	3.1	1.0 X 10^6	268.38
FG1(25)-240X240T2900	FG1	0.025	0.01	25	3.1	1.0 X 10^6	10.69
FG1(25)-240X50M	FG1	0.025	--	25	3.1	1.0 X 10^6	930.00
FG1(25)-240X50MT2900	FG1	0.025	0.01	25	3.1	1.0 X 10^6	2,225.40
FG1(25)-240X80T2900	FG1	0.025	0.01	25	3.1	1.0 X 10^6	3.56
FG1(25)-80X80T2900	FG1	0.025	0.01	25	3.1	1.0 X 10^6	1.19
FG1(50)-120X120T2900	FG1	0.05	0.01	25	3.1	1.0 X 10^6	3.79
FG1(50)-240X10M	FG1	0.05	--	25	3.1	1.0 X 10^6	390.60
FG1(50)-240X10MT2900	FG1	0.05	0.01	25	3.1	1.0 X 10^6	463.68
FG1(50)-240X240T2900	FG1	0.05	0.01	25	3.1	1.0 X 10^6	15.15
FG1(50)-240X50M	FG1	0.05	--	25	3.1	1.0 X 10^6	1,860.00
FG1(50)-240X50MT2900	FG1	0.05	0.01	25	3.1	1.0 X 10^6	3,155.40
FG1(50)-240X80T2900	FG1	0.05	0.01	25	3.1	1.0 X 10^6	5.05
FG1(50)-80X80T2900	FG1	0.05	0.01	25	3.1	1.0 X 10^6	1.68
FG1(75)-120X120T2900	FG1	0.075	0.01	25	3.1	1.0 X 10^6	4.90
FG1(75)-240X10M	FG1	0.075	--	25	3.1	1.0 X 10^6	585.90
FG1(75)-240X10MT2900	FG1	0.075	0.01	25	3.1	1.0 X 10^6	658.98
		mm	mm	μ	Typical	Ω/sq. typical	g
Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight

[1] Permeability at 10 MHz.

Table 1A – Ratings & Part Number Reference cont.

Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight
		mm	mm	μ	Typical	Ω/sq. typical	g
FG1(75)-240X240T2900	FG1	0.075	0.01	25	3.1	1.0 X 10^6	19.61
FG1(75)-240X50M	FG1	0.075	--	25	3.1	1.0 X 10^6	2,790.00
FG1(75)-240X50MT2900	FG1	0.075	0.01	25	3.1	1.0 X 10^6	4,085.40
FG1(75)-240X80T2900	FG1	0.075	0.01	25	3.1	1.0 X 10^6	6.54
FG1(75)-80X80T2900	FG1	0.075	0.01	25	3.1	1.0 X 10^6	2.18
FG2(50)-120X120T2900	FG2	0.05	0.01	30	3.3	1.0 X 108	4.19
FG2(50)-240X10M	FG2	0.05	--	30	3.3	1.0 X 108	442.63
FG2(50)-240X10MT2900	FG2	0.05	0.01	30	3.3	1.0 X 108	520.42
FG2(50)-240X240T2900	FG2	0.05	0.01	30	3.3	1.0 X 108	16.74
FG2(50)-240X50M	FG2	0.05	--	30	3.3	1.0 X 108	2,107.74
FG2(50)-240X50MT2900	FG2	0.05	0.01	30	3.3	1.0 X 108	3,486.72
FG2(50)-240X80T2900	FG2	0.05	0.01	30	3.3	1.0 X 108	5.58
FG2(50)-80X80T2900	FG2	0.05	0.01	30	3.3	1.0 X 108	1.86
FG2(100)-120X120T2900	FG2	0.1	0.01	30	3.3	1.0 X 108	6.72
FG2(100)-240X10M	FG2	0.1	--	30	3.3	1.0 X 108	885.25
FG2(100)-240X10MT2900	FG2	0.1	0.01	30	3.3	1.0 X 108	963.05
FG2(100)-240X240T2900	FG2	0.1	0.01	30	3.3	1.0 X 108	26.89
FG2(100)-240X50M	FG2	0.1	--	30	3.3	1.0 X 108	4,215.48
FG2(100)-240X50MT2900	FG2	0.1	0.01	30	3.3	1.0 X 108	5,594.46
FG2(100)-240X80T2900	FG2	0.1	0.01	30	3.3	1.0 X 108	8.96
FG2(100)-80X80T2900	FG2	0.1	0.01	30	3.3	1.0 X 108	2.99
FS(100)-120X120T2900	FS	0.1	0.01	10 [1]	4.5	1.0 X 10^8	8.12
FS(100)-240X10M	FS	0.1	--	10 [1]	4.5	1.0 X 10^8	1,195.20
FS(100)-240X10MT2900	FS	0.1	0.01	10 [1]	4.5	1.0 X 10^8	1,353.84
FS(100)-240X240T2900	FS	0.1	0.01	10 [1]	4.5	1.0 X 10^8	32.49
FS(100)-240X50M	FS	0.1	--	10 [1]	4.5	1.0 X 10^8	5,976.00
FS(100)-240X50MT2900	FS	0.1	0.01	10 [1]	4.5	1.0 X 10^8	6,769.20
FS(100)-240X80T2900	FS	0.1	0.01	10 [1]	4.5	1.0 X 10^8	10.83
FS(100)-80X80T2900	FS	0.1	0.01	10 [1]	4.5	1.0 X 10^8	3.61
FS(30)-120X120T2900	FS	0.03	0.01	10 [1]	4.5	1.0 X 10^8	3.79
FS(30)-240X10M	FS	0.03	--	10 [1]	4.5	1.0 X 10^8	472.80
FS(30)-240X10MT2900	FS	0.03	0.01	10 [1]	4.5	1.0 X 10^8	631.44
FS(30)-240X240T2900	FS	0.03	0.01	10 [1]	4.5	1.0 X 10^8	15.15
FS(30)-240X50M	FS	0.03	--	10 [1]	4.5	1.0 X 10^8	2,364.00
FS(30)-240X50MT2900	FS	0.03	0.01	10 [1]	4.5	1.0 X 10^8	3,157.20
FS(30)-240X80T2900	FS	0.03	0.01	10 [1]	4.5	1.0 X 10^8	5.05
FS(30)-80X80T2900	FS	0.03	0.01	10 [1]	4.5	1.0 X 10^8	1.68
		mm	mm	μ	Typical	Ω/sq. typical	g
Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight

[1] Permeability at 10 MHz.

Table 1A – Ratings & Part Number Reference cont.

Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight
		mm	mm	μ	Typical	Ω/sq. typical	g
FS(50)-120X120T2900	FS	0.05	0.01	10 [1]	4.5	1.0 X 10^8	5.03
FS(50)-240X10M	FS	0.05	--	10 [1]	4.5	1.0 X 10^8	679.20
FS(50)-240X10MT2900	FS	0.05	0.01	10 [1]	4.5	1.0 X 10^8	837.84
FS(50)-240X240T2900	FS	0.05	0.01	10 [1]	4.5	1.0 X 10^8	20.11
FS(50)-240X50M	FS	0.05	--	10 [1]	4.5	1.0 X 10^8	3,396.00
FS(50)-240X50MT2900	FS	0.05	0.01	10 [1]	4.5	1.0 X 10^8	4,189.20
FS(50)-240X80T2900	FS	0.05	0.01	10 [1]	4.5	1.0 X 10^8	6.70
FS(50)-80X80T2900	FS	0.05	0.01	10 [1]	4.5	1.0 X 10^8	2.23
FS(75)-120X120T2900	FS	0.075	0.01	10 [1]	4.5	1.0 X 10^8	6.58
FS(75)-240X10M	FS	0.075	--	10 [1]	4.5	1.0 X 10^8	937.20
FS(75)-240X10MT2900	FS	0.075	0.01	10 [1]	4.5	1.0 X 10^8	1,095.84
FS(75)-240X240T2900	FS	0.075	0.01	10 [1]	4.5	1.0 X 10^8	26.30
FS(75)-240X50M	FS	0.075	--	10 [1]	4.5	1.0 X 10^8	4,686.00
FS(75)-240X50MT2900	FS	0.075	0.01	10 [1]	4.5	1.0 X 10^8	5,479.20
FS(75)-240X80T2900	FS	0.075	0.01	10 [1]	4.5	1.0 X 10^8	8.77
FS(75)-80X80T2900	FS	0.075	0.01	10 [1]	4.5	1.0 X 10^8	2.92
FW5(30)-80X80T2900	FW5	0.030	0.01	250	3.6	1.0 X 106	3.46
FW5(30)-240X80T2900	FW5	0.030	0.01	250	3.6	1.0 X 106	289.72
FW5(30)-240X50MT2900	FW5	0.030	0.01	250	3.6	1.0 X 106	374.59
FW5(30)-240X50M	FW5	0.030	--	250	3.6	1.0 X 106	13.85
FW5(30)-240X240T2900	FW5	0.030	0.01	250	3.6	1.0 X 106	1,379.61
FW5(30)-240X10MT2900	FW5	0.030	0.01	250	3.6	1.0 X 106	2,883.95
FW5(30)-240X10M	FW5	0.030	--	250	3.6	1.0 X 106	4.62
FW5(30)-120X120T2900	FW5	0.030	0.01	250	3.6	1.0 X 106	1.54
FW5(50)-120X120T2900	FW5	0.05	0.01	250	3.6	1.0 X 10^6	4.57
FW5(50)-240X10M	FW5	0.05	--	250	3.6	1.0 X 10^6	482.86
FW5(50)-240X10MT2900	FW5	0.05	0.01	250	3.6	1.0 X 10^6	567.73
FW5(50)-240X240T2900	FW5	0.05	0.01	250	3.6	1.0 X 10^6	18.27
FW5(50)-240X50M	FW5	0.05	--	250	3.6	1.0 X 10^6	2,299.35
FW5(50)-240X50MT2900	FW5	0.05	0.01	250	3.6	1.0 X 10^6	3,803.69
FW5(50)-240X80T2900	FW5	0.05	0.01	250	3.6	1.0 X 10^6	6.09
FW5(50)-80X80T2900	FW5	0.05	0.01	250	3.6	1.0 X 10^6	2.03
FW5(75)-120X120T2900	FW5	0.075	0.01	250	3.6	1.0 X 10^6	5.95
FW5(75)-240X10M	FW5	0.075	--	250	3.6	1.0 X 10^6	724.30
FW5(75)-240X10MT2900	FW5	0.075	0.01	250	3.6	1.0 X 10^6	809.16
FW5(75)-240X240T2900	FW5	0.075	0.01	250	3.6	1.0 X 10^6	23.78
FW5(75)-240X50M	FW5	0.075	--	250	3.6	1.0 X 10^6	3,449.03
		mm	mm	μ	Typical	Ω/sq. typical	g
Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight

[1] Permeability at 10 MHz.

Table 1A – Ratings & Part Number Reference cont.

Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight
		mm	mm	μ	Typical	Ω/sq. typical	g
FW5(75)-240X50MT2900	FW5	0.075	0.01	250	3.6	1.0 X 10^6	4,953.37
FW5(75)-240X80T2900	FW5	0.075	0.01	250	3.6	1.0 X 10^6	7.93
FW5(75)-80X80T2900	FW5	0.075	0.01	250	3.6	1.0 X 10^6	2.64
FW5(100)-120X120T2900	FW5	0.1	0.01	250	3.6	1.0 X 10^6	7.33
FW5(100)-240X10M	FW5	0.1	--	250	3.6	1.0 X 10^6	965.73
FW5(100)-240X10MT2900	FW5	0.1	0.01	250	3.6	1.0 X 10^6	1,050.60
FW5(100)-240X240T2900	FW5	0.1	0.01	250	3.6	1.0 X 10^6	29.33
FW5(100)-240X50M	FW5	0.1	--	250	3.6	1.0 X 10^6	4,598.71
FW5(100)-240X50MT2900	FW5	0.1	0.01	250	3.6	1.0 X 10^6	6,103.05
FW5(100)-240X80T2900	FW5	0.1	0.01	250	3.6	1.0 X 10^6	9.78
FW5(100)-80X80T2900	FW5	0.1	0.01	250	3.6	1.0 X 10^6	3.26
FX5(100)-120X120T2900	FX5	0.1	0.01	150	3.3	1.0 X 10^6	6.32
FX5(100)-240X10M	FX5	0.1	--	150	3.3	1.0 X 10^6	831.60
FX5(100)-240X10MT2900	FX5	0.1	0.01	150	3.3	1.0 X 10^6	904.68
FX5(100)-240X240T2900	FX5	0.1	0.01	150	3.3	1.0 X 10^6	25.26
FX5(100)-240X50M	FX5	0.1	--	150	3.3	1.0 X 10^6	3,960.00
FX5(100)-240X50MT2900	FX5	0.1	0.01	150	3.3	1.0 X 10^6	5,255.40
FX5(100)-240X80T2900	FX5	0.1	0.01	150	3.3	1.0 X 10^6	8.42
FX5(100)-80X80T2900	FX5	0.1	0.01	150	3.3	1.0 X 10^6	2.81
FX5(25)-120X120T2900	FX5	0.025	0.01	150	3.3	1.0 X 10^6	2.74
FX5(25)-240X10M	FX5	0.025	--	150	3.3	1.0 X 10^6	207.90
FX5(25)-240X10MT2900	FX5	0.025	0.01	150	3.3	1.0 X 10^6	280.98
FX5(25)-240X240T2900	FX5	0.025	0.01	150	3.3	1.0 X 10^6	10.97
FX5(25)-240X50M	FX5	0.025	--	150	3.3	1.0 X 10^6	990.00
FX5(25)-240X50MT2900	FX5	0.025	0.01	150	3.3	1.0 X 10^6	2,285.40
FX5(25)-240X80T2900	FX5	0.025	0.01	150	3.3	1.0 X 10^6	3.66
FX5(25)-80X80T2900	FX5	0.025	0.01	150	3.3	1.0 X 10^6	1.22
		mm	mm	μ	Typical	Ω/sq. typical	g
Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight

[1] Permeability at 10 MHz.

Table 1A – Ratings & Part Number Reference cont.

Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight
		mm	mm	μ	Typical	Ω/sq. typical	g
FX5(50)-120X120T2900	FX5	0.05	0.01	150	3.3	1.0 X 10^6	3.93
FX5(50)-240X10M	FX5	0.05	--	150	3.3	1.0 X 10^6	415.80
FX5(50)-240X10MT2900	FX5	0.05	0.01	150	3.3	1.0 X 10^6	488.88
FX5(50)-240X240T2900	FX5	0.05	0.01	150	3.3	1.0 X 10^6	15.73
FX5(50)-240X50M	FX5	0.05	--	150	3.3	1.0 X 10^6	1,980.00
FX5(50)-240X50MT2900	FX5	0.05	0.01	150	3.3	1.0 X 10^6	3,275.40
FX5(50)-240X80T2900	FX5	0.05	0.01	150	3.3	1.0 X 10^6	5.24
FX5(50)-80X80T2900	FX5	0.05	0.01	150	3.3	1.0 X 10^6	1.75
FX5(75)-120X120T2900	FX5	0.075	0.01	150	3.3	1.0 X 10^6	5.12
FX5(75)-240X10M	FX5	0.075	--	150	3.3	1.0 X 10^6	623.70
FX5(75)-240X10MT2900	FX5	0.075	0.01	150	3.3	1.0 X 10^6	696.78
FX5(75)-240X240T2900	FX5	0.075	0.01	150	3.3	1.0 X 10^6	20.48
FX5(75)-240X50M	FX5	0.075	--	150	3.3	1.0 X 10^6	2,970.00
FX5(75)-240X50MT2900	FX5	0.075	0.01	150	3.3	1.0 X 10^6	4,265.40
FX5(75)-240X80T2900	FX5	0.075	0.01	150	3.3	1.0 X 10^6	6.83
FX5(75)-80X80T2900	FX5	0.075	0.01	150	3.3	1.0 X 10^6	2.28
		mm	mm	μ	Typical	Ω/sq. typical	g
Part Number	Series	Thickness	Tape Thickness	Permeability at 3 MHz	Specific Gravity	Surface Resistivity	Weight

[1] *Permeability at 10 MHz.*

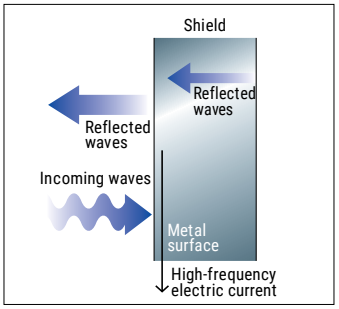
Table 1B – Not for New Design Ratings & Part Number Reference

Part Number	Series	Thickness	Tape Thickness	Permeability	Specific Gravity	Tensile Strength	Surface Resistivity	Thermal Conductivity
		mm	mm	at 3 MHz	Typical	Mpa Minimum	Ω/sq. typical	W/mK
EFR(005)-240x240T0800	EFR	0.05	0.03	60	2.8	3.6	1.0×10^7	0.22
EFR(01)-240x240T0800	EFR	0.1	0.03	60	2.8	3.6	1.0×10^7	0.22
EFR(02)-240x240	EFR	0.2	--	60	2.8	3.6	1.0×10^7	0.22
EFR(02)-240x240T0800	EFR	0.2	0.03	60	2.8	3.6	1.0×10^7	0.22
EFR(03)-240x240	EFR	0.3	--	60	2.8	3.6	1.0×10^7	0.22
EFR(03)-240x240T0800	EFR	0.3	0.03	60	2.8	3.6	1.0×10^7	0.22
EFR(05)-240x240	EFR	0.5	--	60	2.8	3.6	1.0×10^7	0.22
EFR(05)-240x240T1500	EFR	0.5	0.14	60	2.8	3.6	1.0×10^7	0.22
EFR(10)-240x240	EFR	1	--	60	2.8	3.6	1.0×10^7	0.22
EFR(10)-240x240T1500	EFR	1	0.14	60	2.8	3.6	1.0×10^7	0.22
EFX(005)-240x240T0800	EFX	0.05	0.03	100	3.2	6.8	1.0×10^6	0.22
EFX(01)-240x240T0800	EFX	0.1	0.03	100	3.2	6.8	1.0×10^6	0.22
EFX(02)-240x240	EFX	0.2	--	100	3.2	6.8	1.0×10^6	0.22
EFX(02)-240x240T0800	EFX	0.2	0.03	100	3.2	6.8	1.0×10^6	0.22
EFX(03)-240x240	EFX	0.3	--	100	3.2	6.8	1.0×10^6	0.22
EFX(03)-240x240T0800	EFX	0.3	0.03	100	3.2	6.8	1.0×10^6	0.22
EFX(05)-240x240	EFX	0.5	--	100	3.2	6.8	1.0×10^6	0.22
EFX(05)-240x240T1500	EFX	0.5	0.14	100	3.2	6.8	1.0×10^6	0.22
EFF(007)-240x240T0800	EFF	0.07	0.03	130	3.6	6.9	1.0×10^6	0.4
EFF(01)-240x240T0800	EFF	0.1	0.03	130	3.6	6.9	1.0×10^6	0.4
EFF(02)-240x240	EFF	0.2	--	130	3.6	6.9	1.0×10^6	0.4
EFF(02)-240x240T0800	EFF	0.2	0.03	130	3.6	6.9	1.0×10^6	0.4
EFF(03)-240x240	EFF	0.3	--	130	3.6	6.9	1.0×10^6	0.4
EFF(03)-240x240T0800	EFF	0.3	0.03	130	3.6	6.9	1.0×10^6	0.4
EFA(003)-240x240T0800	EFA	0.03	0.03	60	3.1	6.8	1.0×10^7	1.3
EFG(005)-240x240T0800	EFG	0.05	0.03	20	3	3.5	1.0×10^6	0.22
EFG(01)-240x240T0800	EFG	0.1	0.03	20	3	3.5	1.0×10^6	0.22
EFG(02)-240x240	EFG	0.2	--	20	3	3.5	1.0×10^6	0.22
EFG(02)-240x240T0800	EFG	0.2	0.03	20	3	3.5	1.0×10^6	0.22
EFG(03)-240x240	EFG	0.3	--	20	3	3.5	1.0×10^6	0.22
EFG(03)-240x240T0800	EFG	0.3	0.03	20	3	3.5	1.0×10^6	0.22
EFH(005)-240x240T2200	EFH	0.05	0.05	60	3.1	6.8	1.0×10^7	1.3
EFH(01)-240x240T2200	EFH	0.1	0.05	60	3.1	6.8	1.0×10^7	1.3
		mm	mm	at 3 MHz	Typical	Mpa Minimum	Ω/sq. typical	W/mK
Part Number	Series	Thickness	Tape Thickness	Permeability	Specific Gravity	Tensile Strength	Surface Resistivity	Thermal Conductivity

Shielding

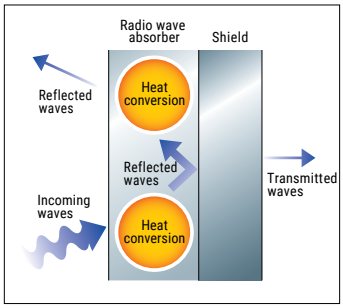
Shielding materials (metal, electrically conductive material)

While transmitted waves can be minimized, most of the incoming waves are reflected, causing internal interference.
High frequency electric current occurs on the metal surfaces and the reflected noise occurs at the shielding joints, metal openings, and other parts when the grounding is poor.



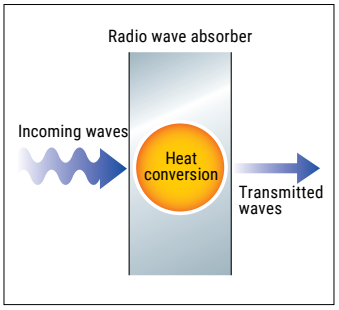
Shielding material with radio wave absorber

Shielding material with radio wave absorber, transmitted waves and reflected waves can be minimized by mounting metal plates on the back of the radio wave absorbers.



Radio wave absorbers

To prevent reflection, the electromagnetic energy is absorbed and converted into heat.



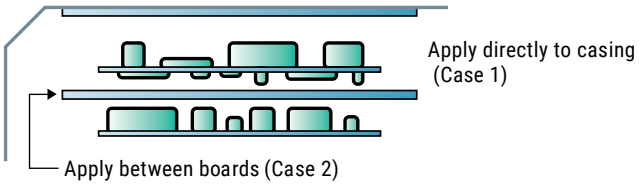
Reference: other absorbing and reflecting examples

	Absorbing	Reflecting
Radio Waves	Radio waves absorbers	Metals
Light	Black objects	White objects, mirrors
Sound	Absorbers, felt	Solid bodies (concrete, etc.)

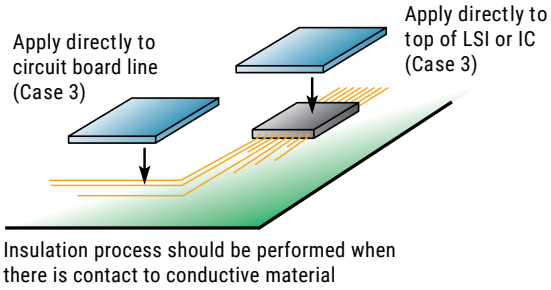
Applications

Case 1 – Suppressing noise reflected by casing

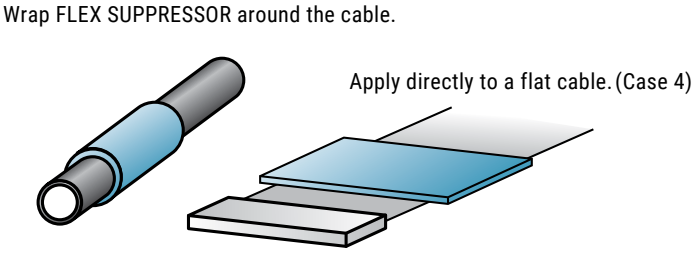
Case 2 – Suppressing crosstalk between substrates



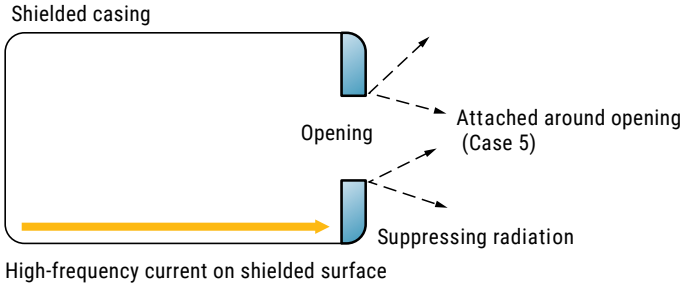
Case 3 – Suppressing radiation noise from LSI and IC



Case 4 – Suppressing noise from cables

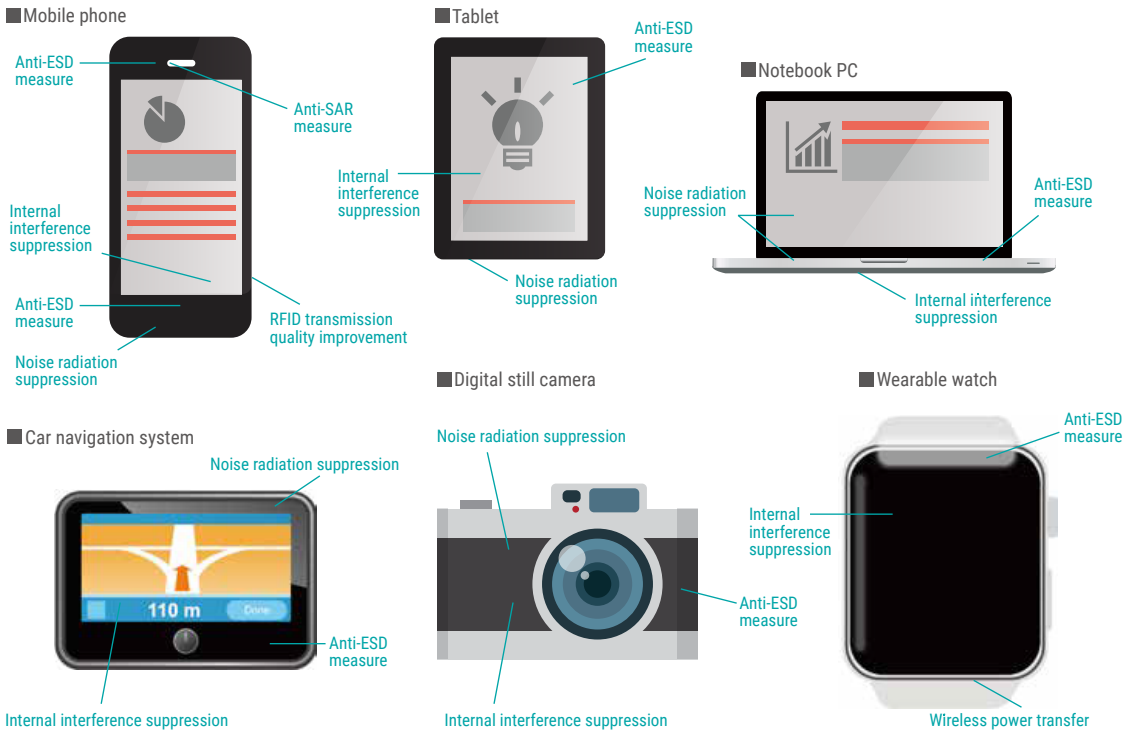


Case 5 – Suppressing noise radiation (reflected noise) from the opening of the shield, the casing, etc.



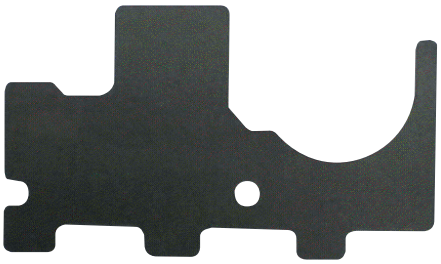
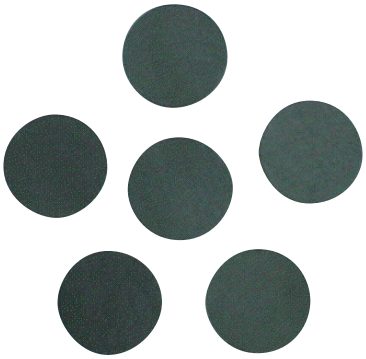
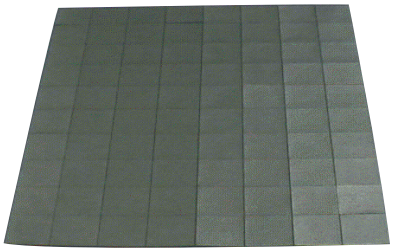
Applications cont.

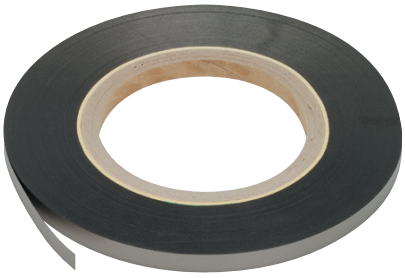
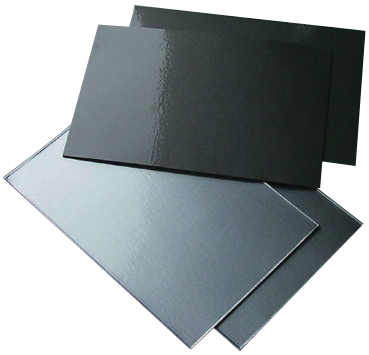
Devices	Noise Radiation Suppression	Internal Interference Suppression	RFID Transmission Quality Improvement	Anti-ESD Measure	Anti-SAR Measure
Mobile phone	On main CPU	On FPC and LSI for LCD module and camera module On main CPU for reception improvement	On loop antenna for distance communication improvement	On FPC and LSI for LCD module and camera module On metal parts such as chassis	Near antenna and on chassis
Digital still camera and digital video camera	On CCD module FPD On image processing LSI On a memory slot	On the board	On loop antenna for distance communication improvement	On the board and FPC On metal parts such as chassis	–
Notebook PC and tablet	On CPU and GPU On cables inside LCD panel	On memory and SSD On wireless LAN and LTE module	On loop antenna and metal parts near antenna for distance communication improvement	On CPU and GPU On metal parts such as chassis	Near antenna and on chassis
Car infotainment	On LCD and FPC On control box	On GPS receiver and TV tuner On LSI for LCD for radio reception improvement	–	On metal parts such as chassis	–
Near field communication tag (NFC tag)	–	–	On loop antenna and metal parts near antenna for distance communication improvement	–	–
Base station, optical transceiver module	–	On the interior of the chassis and on LSI for error rate improvement	–	–	–
Wireless LAN and Wi-Fi.	–	On cable and co-axial cable for reception improvement	–	–	–



Examples of Shapes

KEMET FLEX SUPPRESSOR sheets can be cut into a variety of shapes and sizes:

With holes, cut-out shapes, and circular shapes		Precut
		

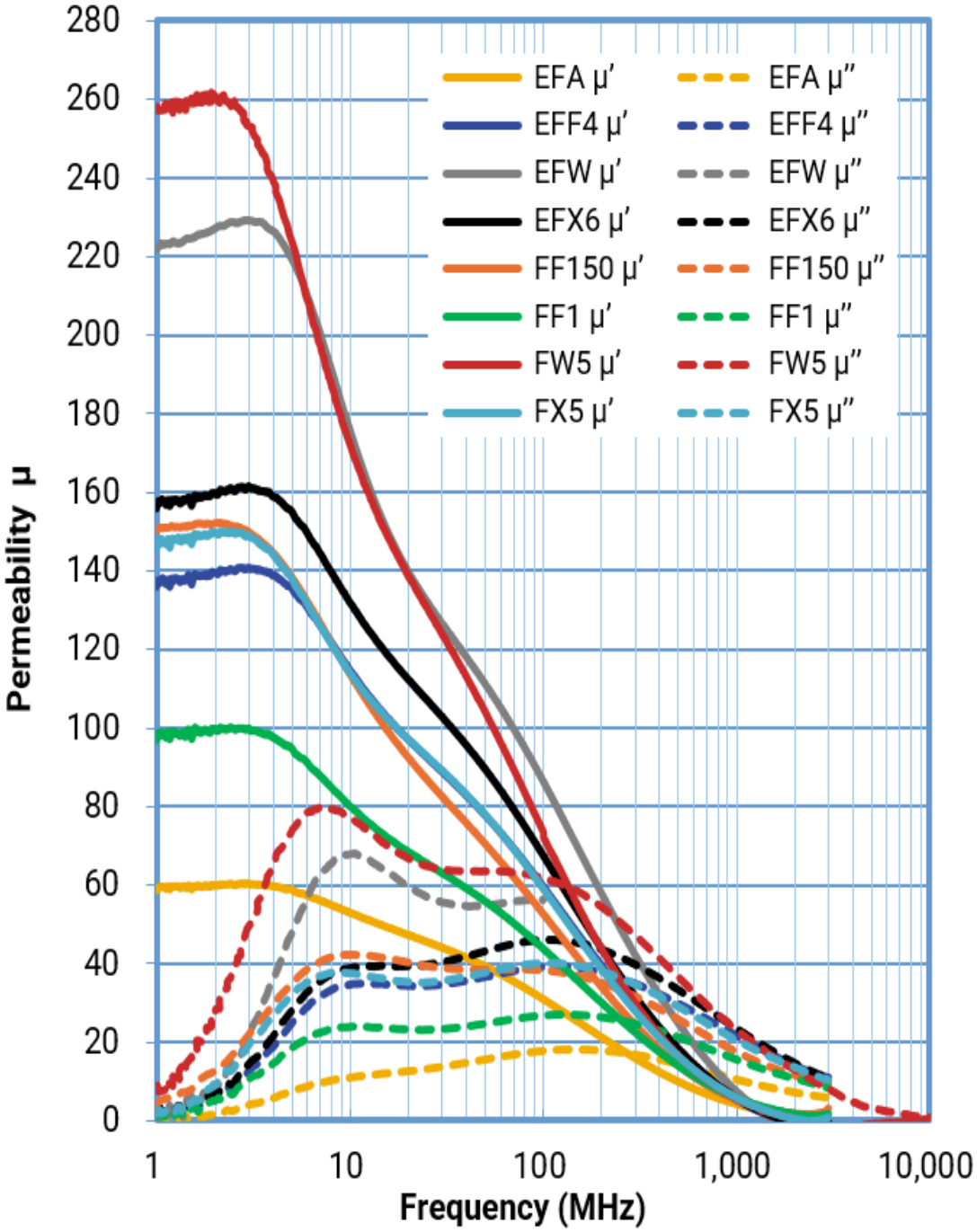
Reel	Roll	With Aluminum or PET sheet
		

Some examples of customization, available upon request:

- The use of PET film in the front, for insulation or mechanical support
- The use of aluminum sheet in the front, for shielding effect
- The use of different adhesive tapes on the back - stronger, thinner, thicker, etc.

Customization Examples	Where	Function
PET Film	Front	Insulation or mechanical support
Aluminum sheet	Front	Shielding effect
Different adhesive tape	Back	Stronger adhesive tape Thinner or thicker tape Reflow capable, double-sided tape

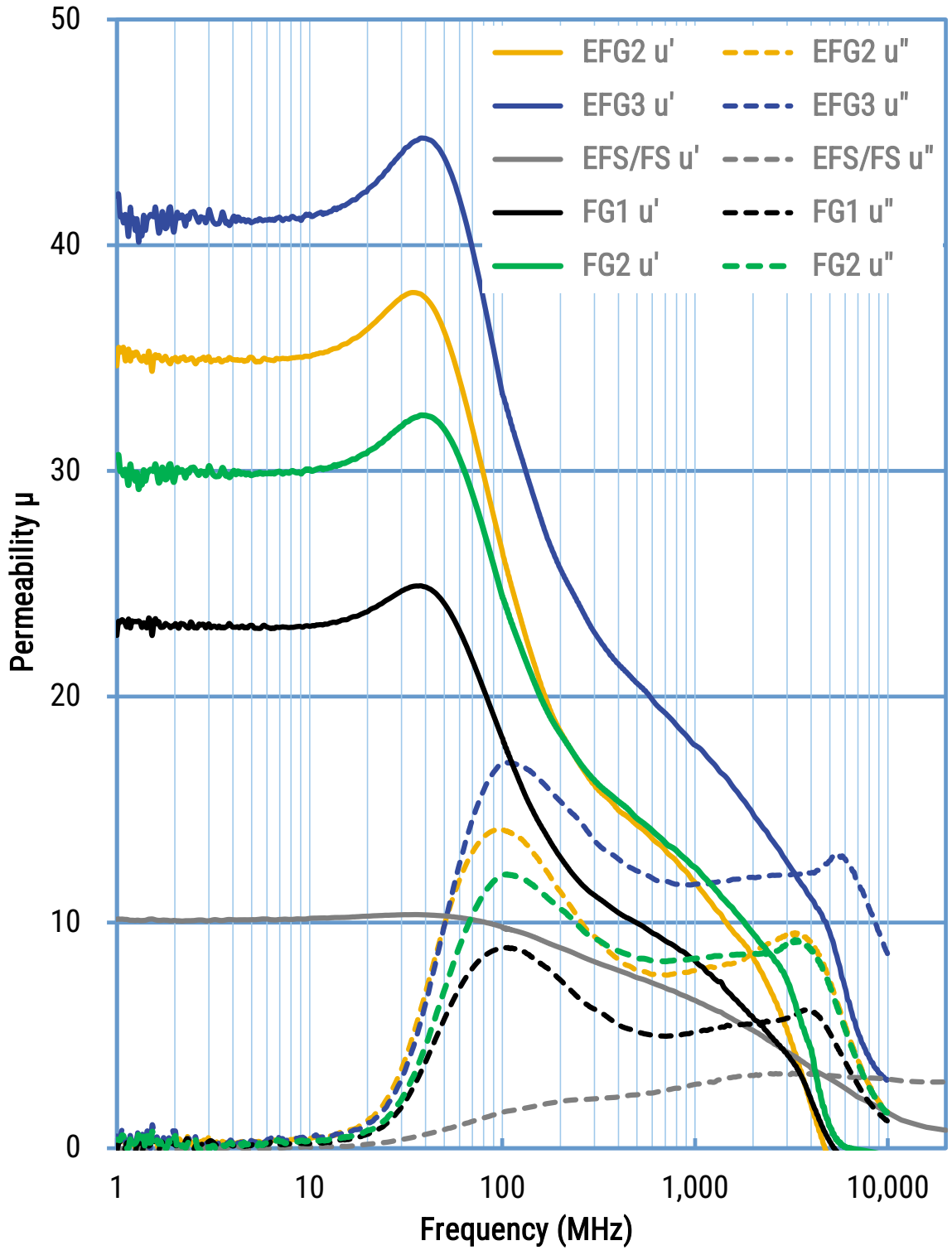
Permeability Characteristics



Above data are not guaranteed values.

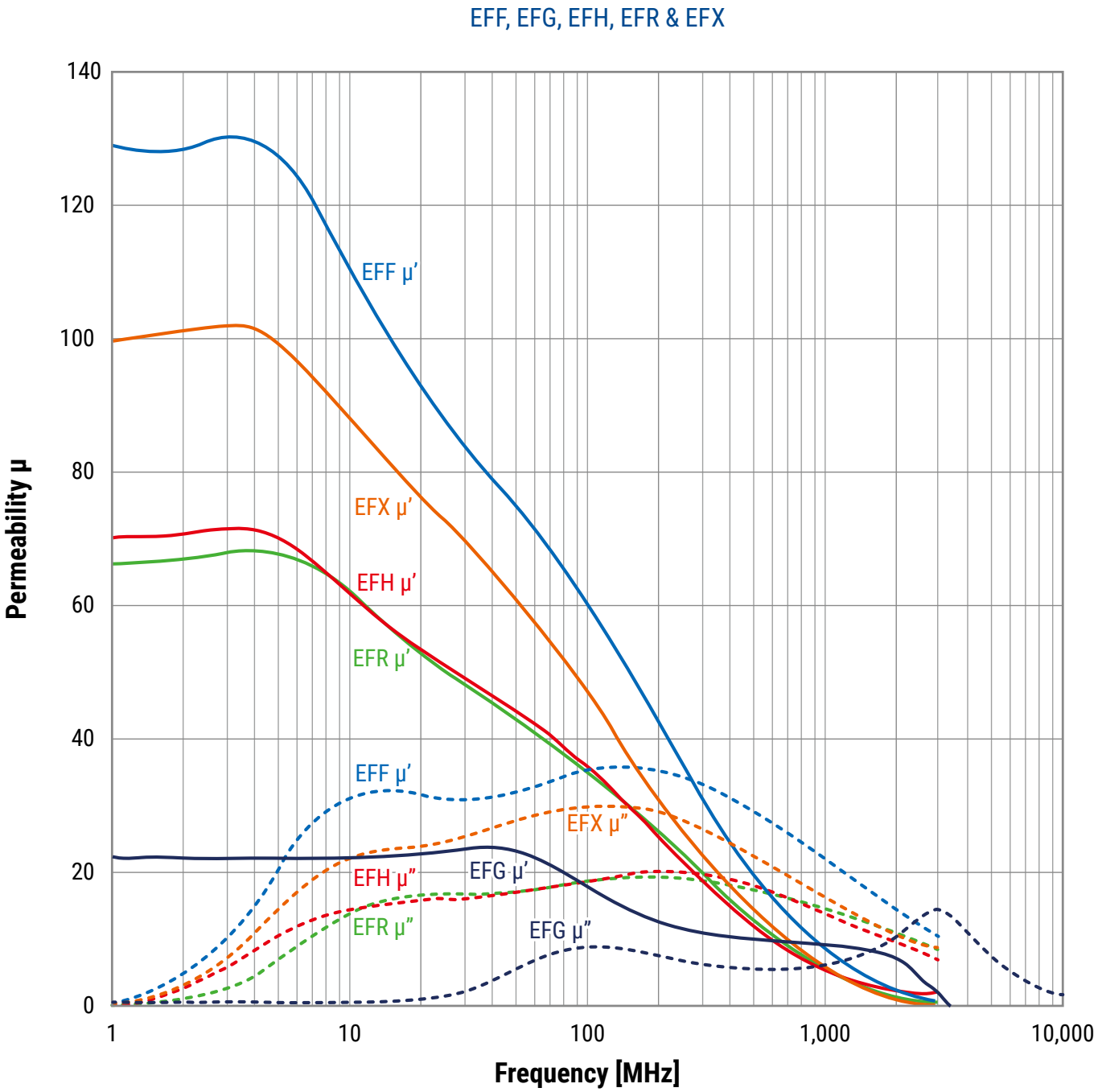
Permeability Characteristics cont.

EFG2, EFG3, EFS, FG1, FG2 & FS



Above data are not guaranteed values.

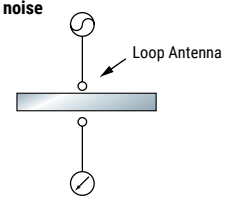
Permeability Characteristics - Not for New Design



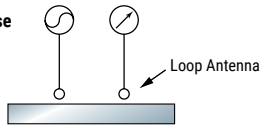
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Measuring Method of Electrical Characteristics

●Attenuation of transmission noise

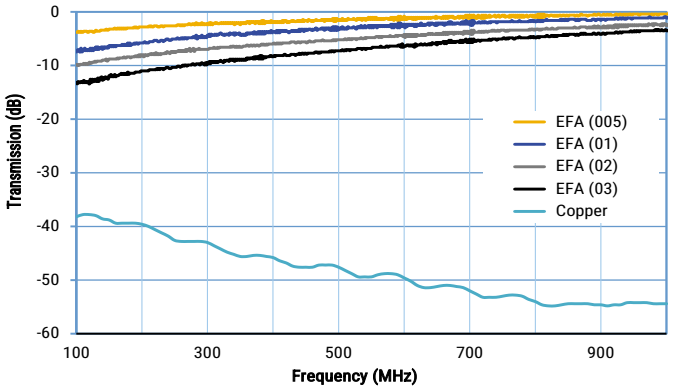


●Attenuation of coupling noise

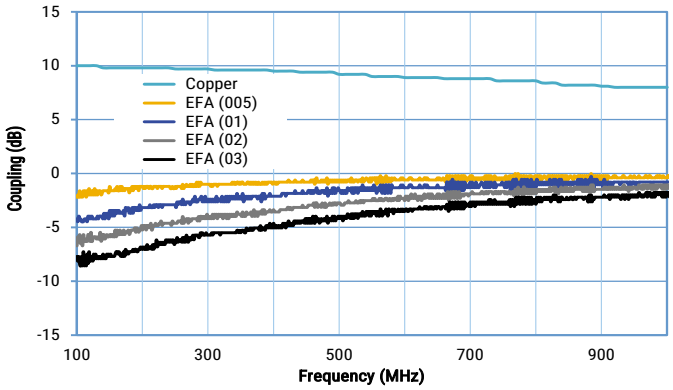


Electrical Characteristics

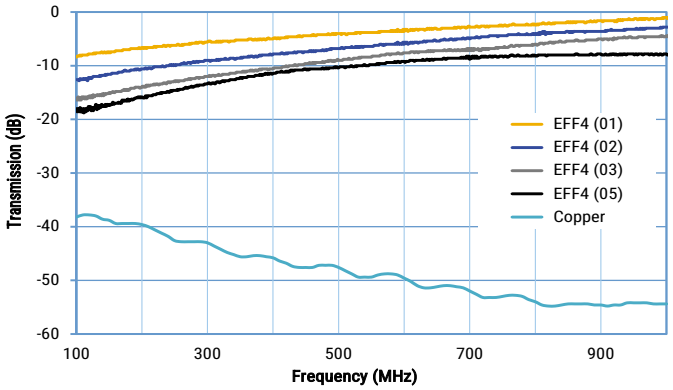
EFA– Attenuation of Transmission Noise



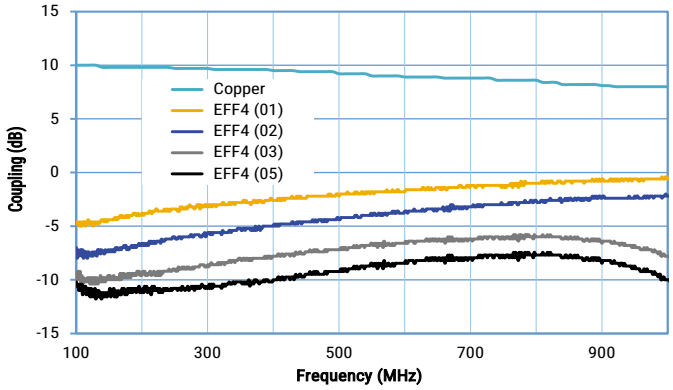
EFA – Attenuation of Coupling Noise



EFF4 – Attenuation of Transmission Noise



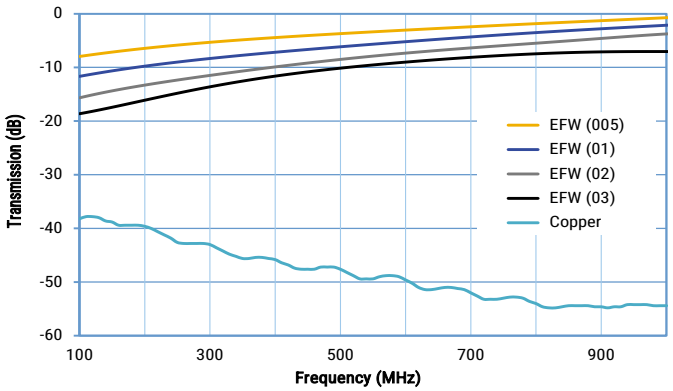
EFF4 – Attenuation of Coupling Noise



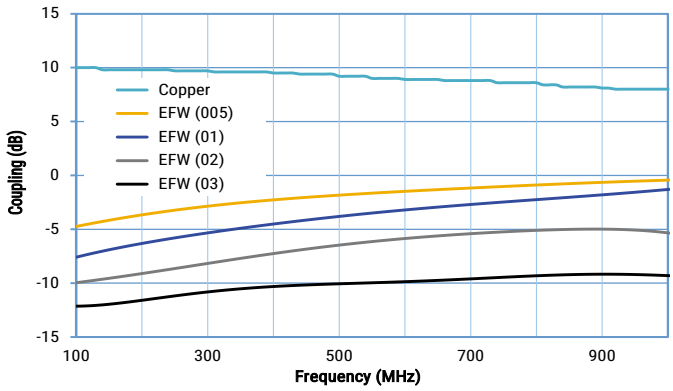
Above data are not guaranteed values.

Electrical Characteristics cont.

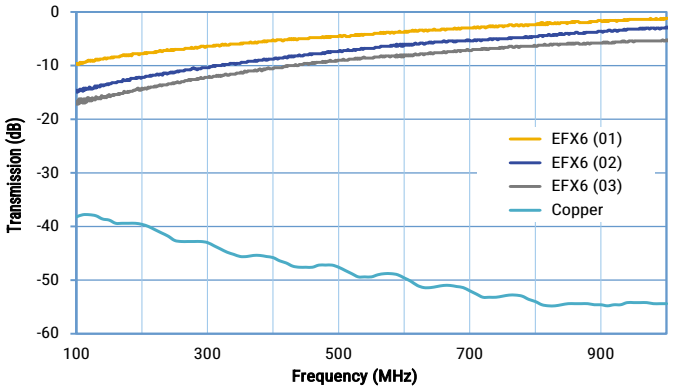
EFW – Attenuation of Transmission Noise



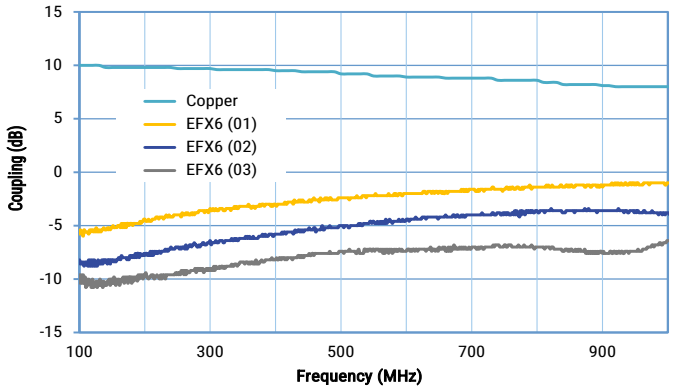
EFW – Attenuation of Coupling Noise



EFX6 – Attenuation of Transmission Noise



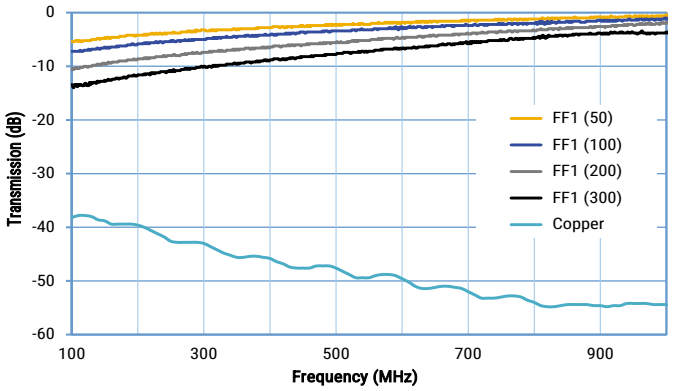
EFX6 – Attenuation of Coupling Noise



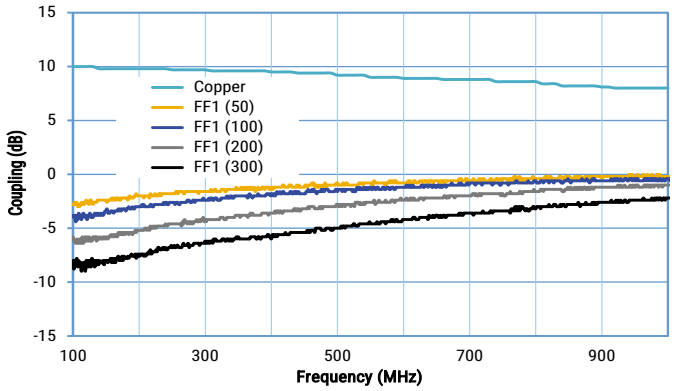
Above data are not guaranteed values.

Electrical Characteristics cont.

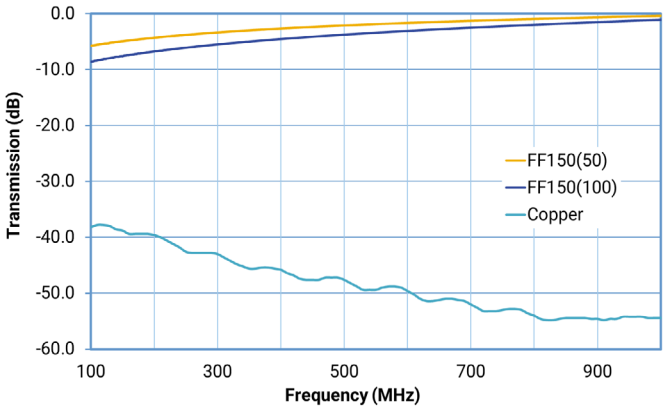
FF1 – Attenuation of Transmission Noise



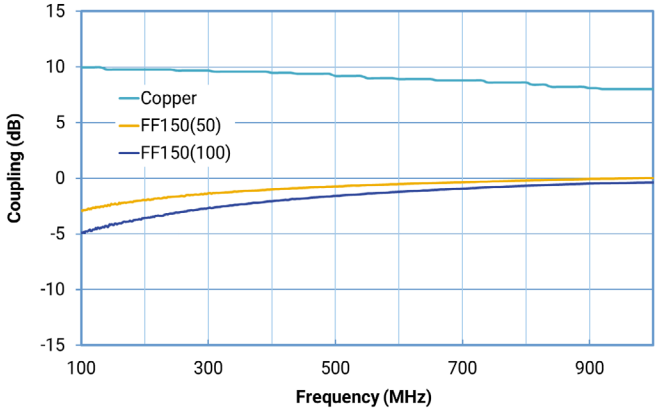
FF1 – Attenuation of Coupling Noise



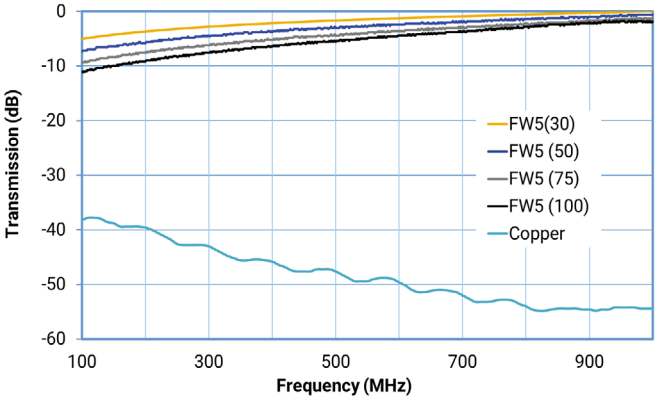
FF150 - Attenuation of Transmission Noise



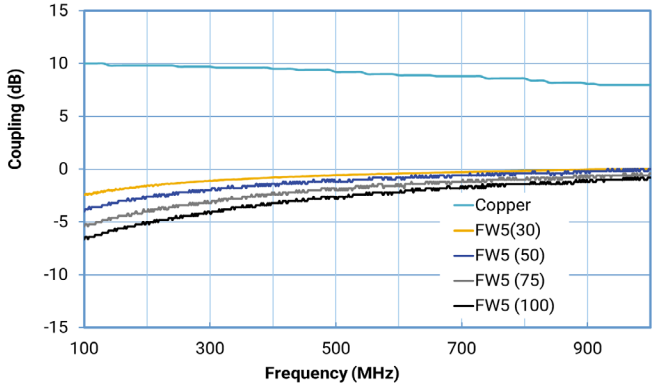
FF150 - Attenuation of Coupling Noise



FW5 – Attenuation of Transmission Noise



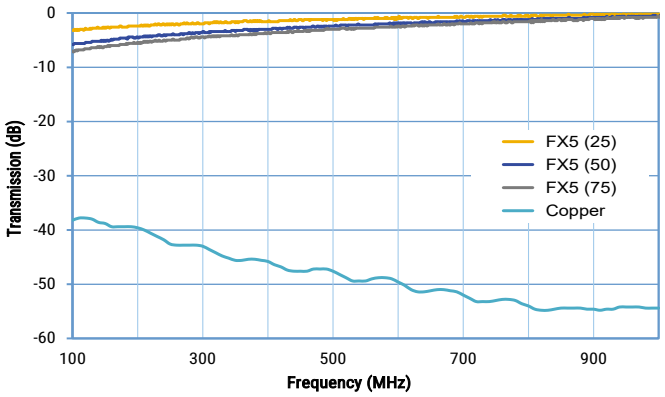
FW5 – Attenuation of Coupling Noise



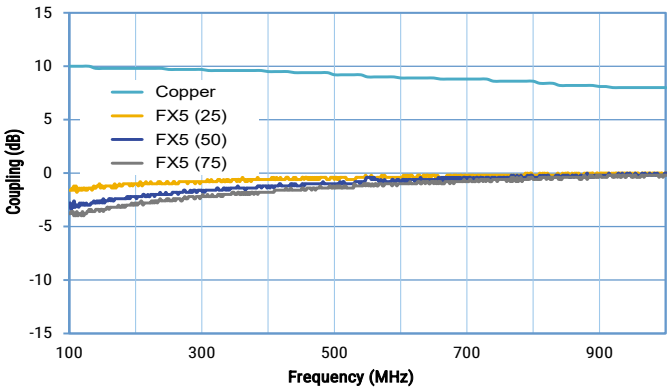
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Electrical Characteristics - Not for New Design

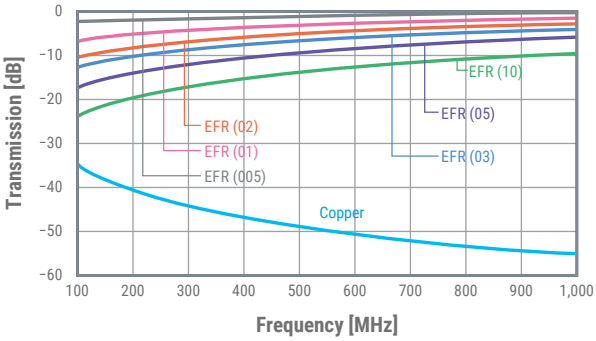
FX5 – Attenuation of Transmition Noise



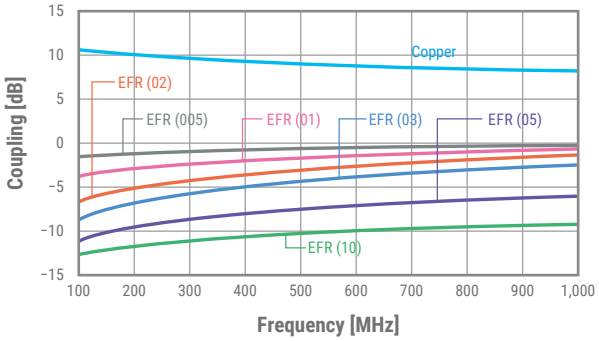
FX5 – Attenuation of Coupling Noise



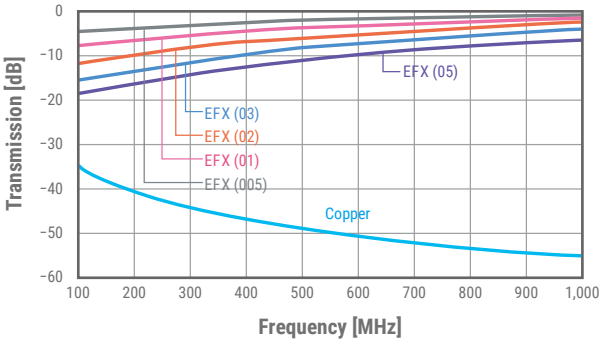
EFR – Attenuation of Transmission Noise



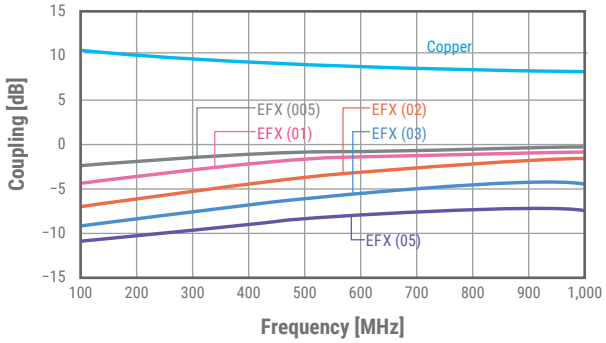
EFR – Attenuation of Coupling Noise



EFX – Attenuation of Transmission Noise



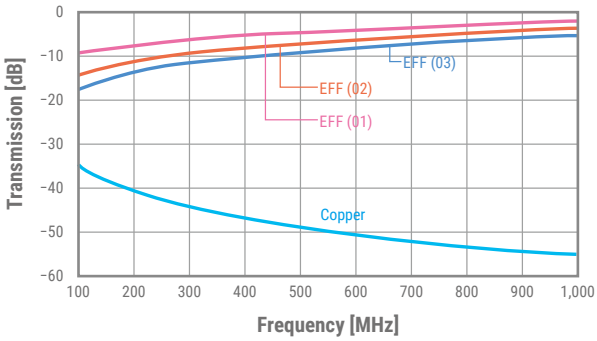
EFX – Attenuation of Coupling Noise



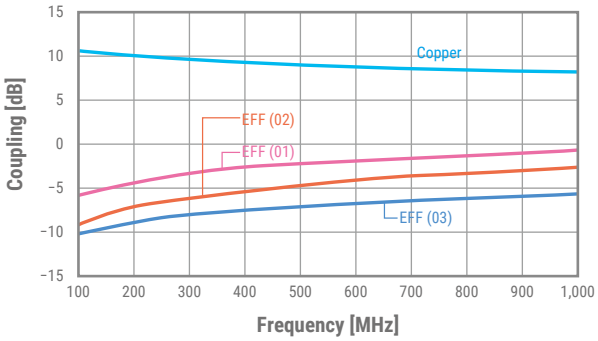
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Electrical Characteristics - Not for New Design cont.

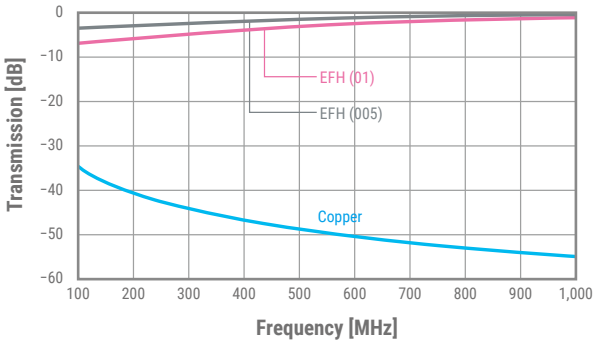
EFF – Attenuation of Transmission Noise



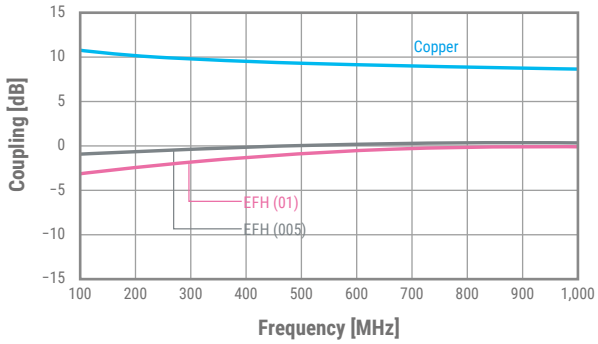
EFF – Attenuation of Coupling Noise



EFH – Attenuation of Transmission Noise

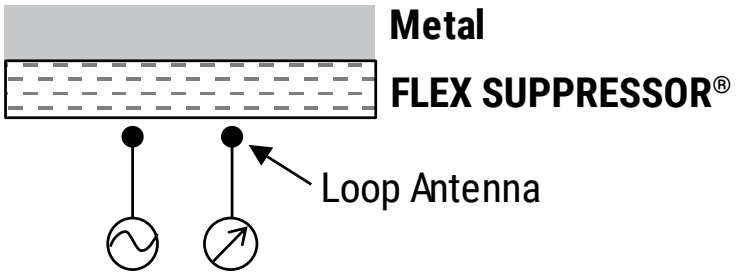


EFH – Attenuation of Coupling Noise

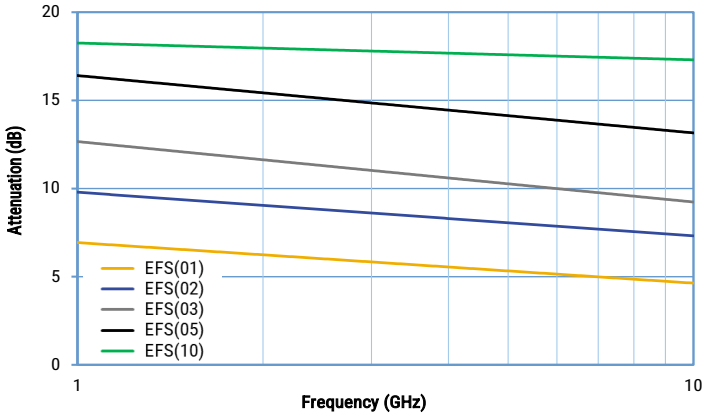


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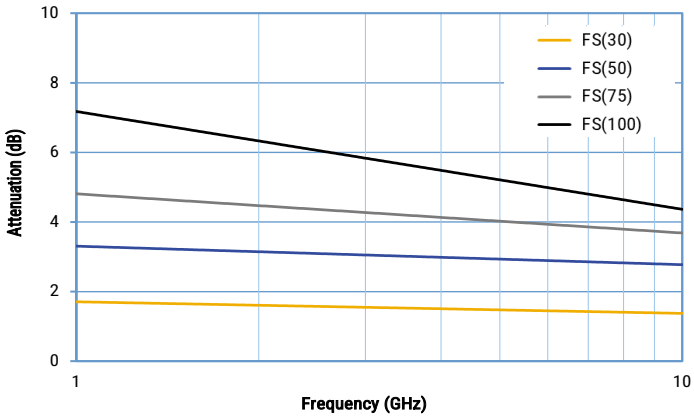
Measuring Method of Attenuation of Decoupling Noise with Metal



EFS

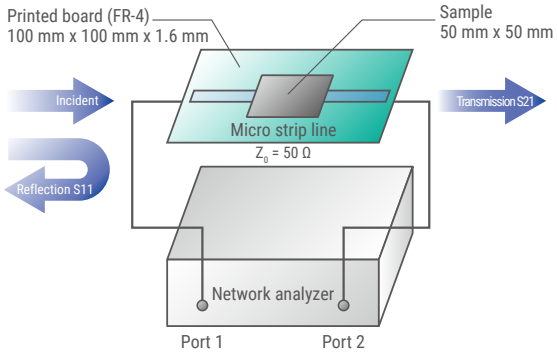


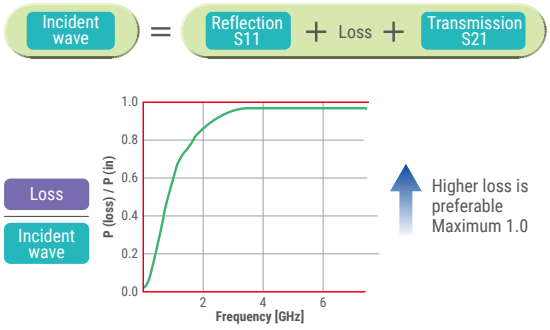
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Measuring Method of Transmission Noise Attenuation Characteristics

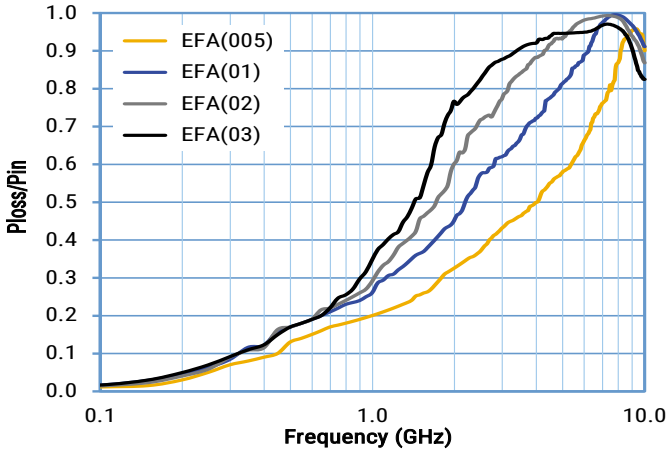




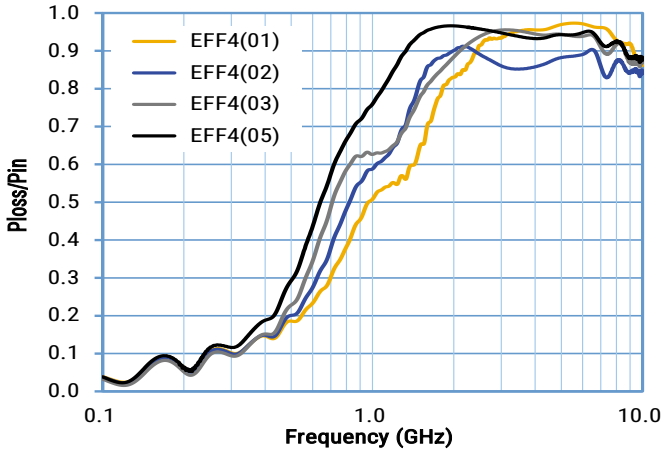
Transmission Noise Attenuation Characteristics

Shown in the graphs below are values of transmission loss calculated from the transmission characteristics S11 and S21, measured on Z_0 = 50 Ω type micro strip line (MSL) with a FLEX SUPPRESSOR® attached.

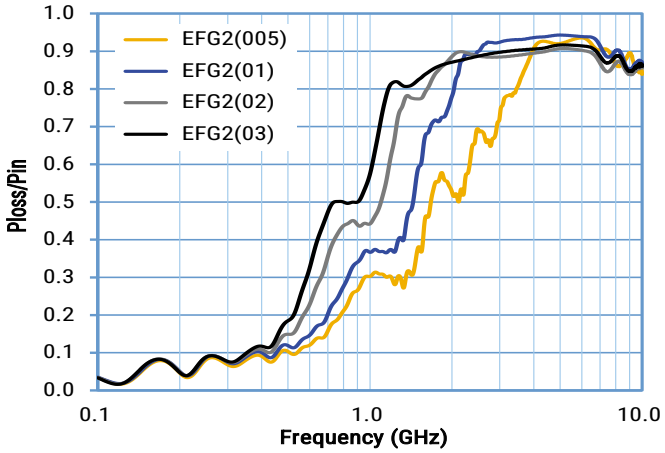
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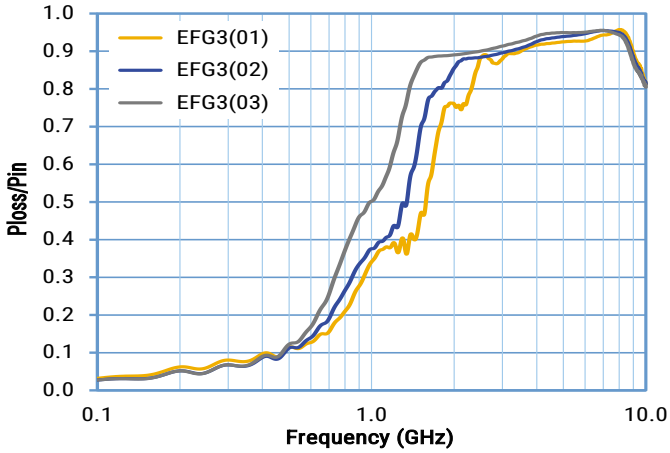
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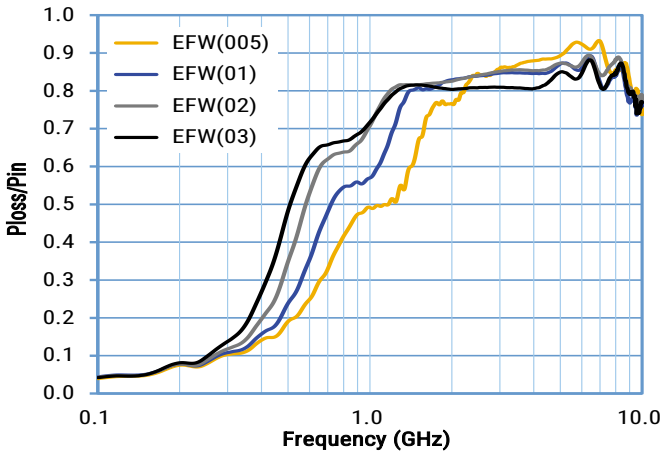
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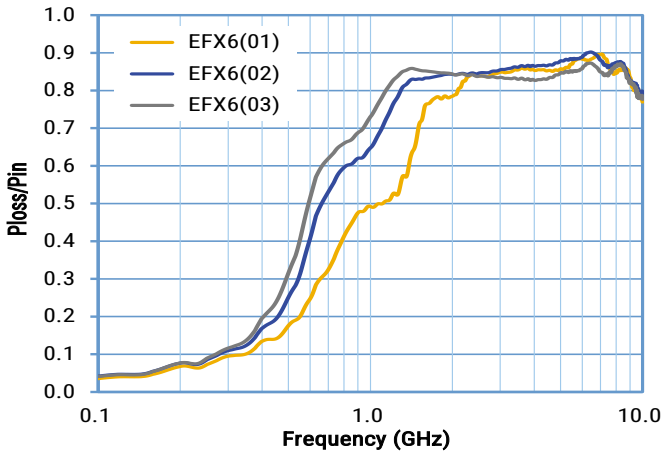
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EFW



EFX6

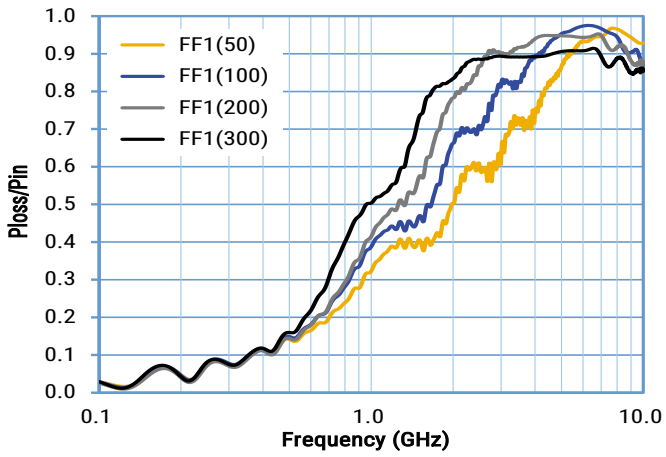


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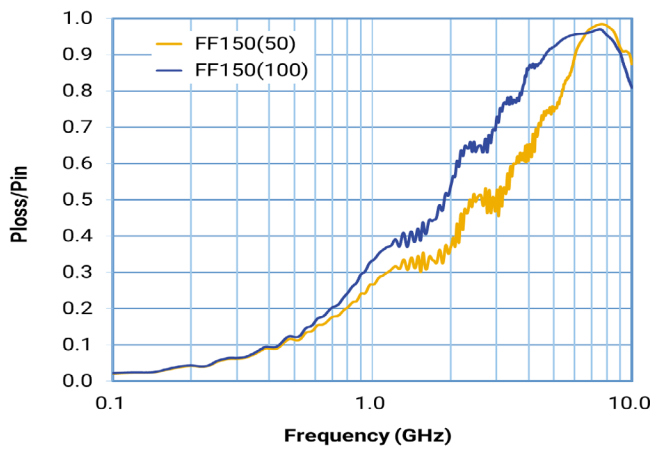
Transmission Noise Attenuation Characteristics cont.

Shown in the graphs below are values of transmission loss calculated from the transmission characteristics S11 and S21, measured on Z_0 = 50 Ω type micro strip line (MSL) with a FLEX SUPPRESSOR® attached.

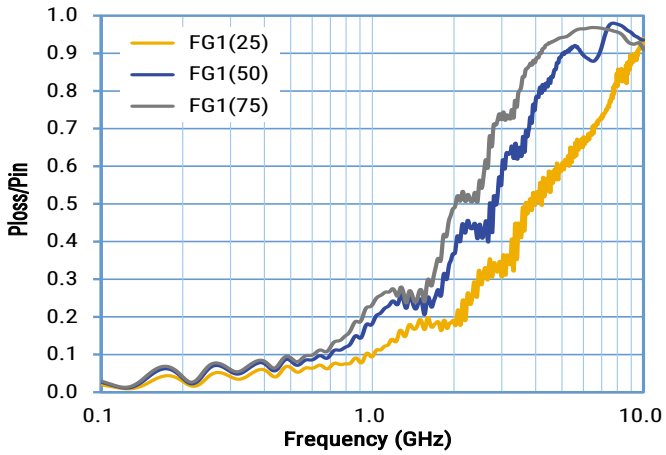
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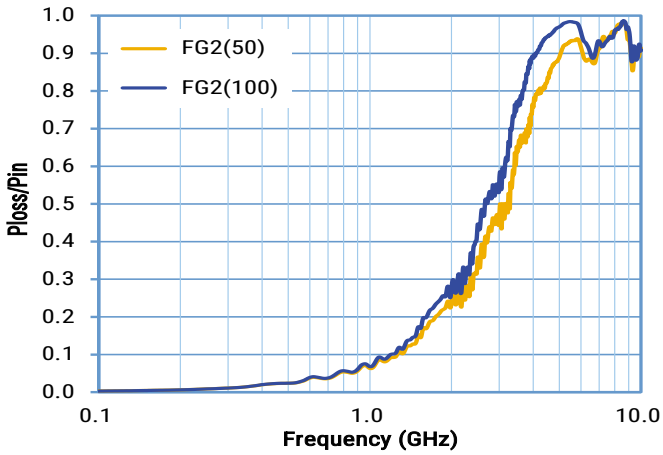
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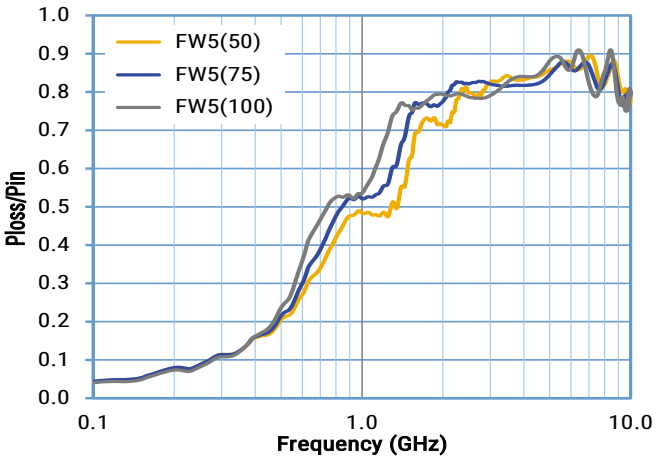
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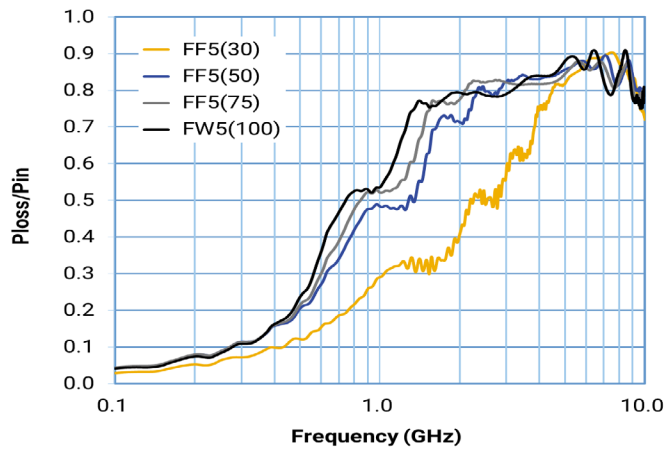
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FW5



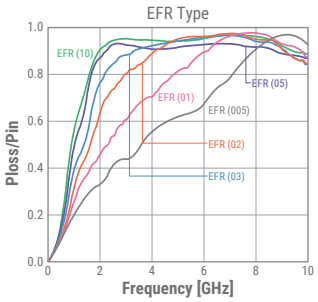
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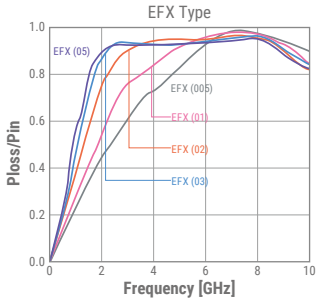


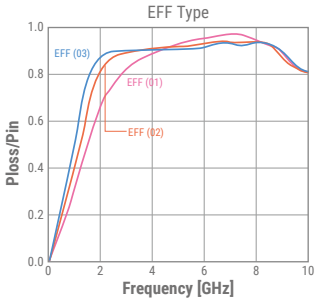
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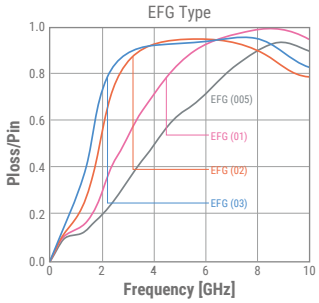
Transmission Noise Attenuation Characteristics- Not for New Design

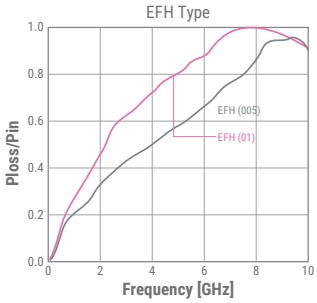
Shown in the graphs below are values of transmission loss calculated from the transmission characteristics S11 and S21, measured on Z_0 = 50 Ω type micro strip line (MSL) with a FLEX SUPPRESSOR® attached.





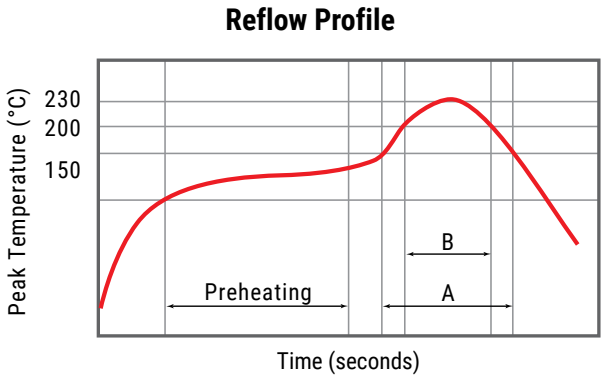






Above data are not guaranteed values.

Soldering Process



Peak Temperature	+260°C
Preheating	150 – 180°C 90 seconds maximum
A	200°C or more, 60 seconds maximum
B	230°C or more, 40 seconds maximum
Number of Times	2 times maximum

All noise suppression sheets are reflow capable, if used with special double-sided adhesive tape. Available upon request. Please contact KEMET respresentative for more details.

Handling Precautions

Avoid high temperature, humidity and direct sunlight. Storage environment should be below 40°C and below 70% relative humidity.

The surface resistance value listed in this catalog is a reference value of the circuit parameter to indicate noise suppression. The value does not represent the product's insulation characteristics. The value may become lower if an excess pressure is applied to the product.

The products in this datasheet are not insulators, they need to be handled as conductors. Care must be taken when in use, so that conductive material does not contact the surface or the edge of the FLEX SUPPRESSOR sheet. Insulation process should be performed when contact to conductive material is probable.

Depending on the processing procedure, powdery substance may drop out from sheet surface or the edge, if the cutting of the sheet is performed. Depending on the location, care must be taken, as this powder may effect the component's performance.

Any dust, oil or moisture must be cleaned from the surface of the installation area when using an adhesive tape to attach the sheet.

The adhesive tape may begin to lose some of its adhesiveness after being in storage for six months. This has no impact on the EMI filtering effectiveness.

Information on environmentally influential substances

The FLEX SUPPRESSOR does not contain any of the substances listed below:

(1) Ozone depleting substance
- CFC (chlorofluorocarbon)
- Halon
- Carbon tetrachloride
- 1,1,1-Trichloroethane
- HCFC (hydrochlorofluorocarbon)
- HBFC (hydrobromfluorcarbon)
- Methyl bromide

(2) Substances regulated by EU RoHS Directive 2011/65/EU and EU Directive 2015/863
- Lead and lead compound
- Mercury and mercury compound
- Cadmium and cadmium compound (content of plastics that are below 5 ppm)
- Hexavalent chromium and hexavalent chromium compound
- PBB (polybrominated biphenyl) and its kind
- PBDE (polybrominated diphenylether)
- DEHP (bis-(2-ethylhexy) phthalate)
- BBP (benzylbuty phthalate)
- DBP (dibutyl phthalate)
- DIBP (diisobuty phthalate)

(3) Other environmentally influential substances (examples)
- PCB (polychlorinated biphenyl)
- Polychlorinated naphthalene
- Hexachlorobenzene
- Organotin compounds (tributyl tin, triphenyl tin)
- Asbestos
- Azo compound
- Chlorinated paraffin and its kind (paraffin chloride, chlorinated paraffin and chloroparaffin)
- Radioactive substance
- PVC

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Although KEMET designs and manufactures its products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage.

Although all product–related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated or that other measures may not be required.

When providing KEMET products and technologies contained herein to other countries, the customer must abide by the procedures and provisions stipulated in all applicable export laws and regulations, including without limitation the International Traffic in Arms Regulations (ITAR), the US Export Administration Regulations (EAR) and the Japan Foreign Exchange and Foreign Trade Act.

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