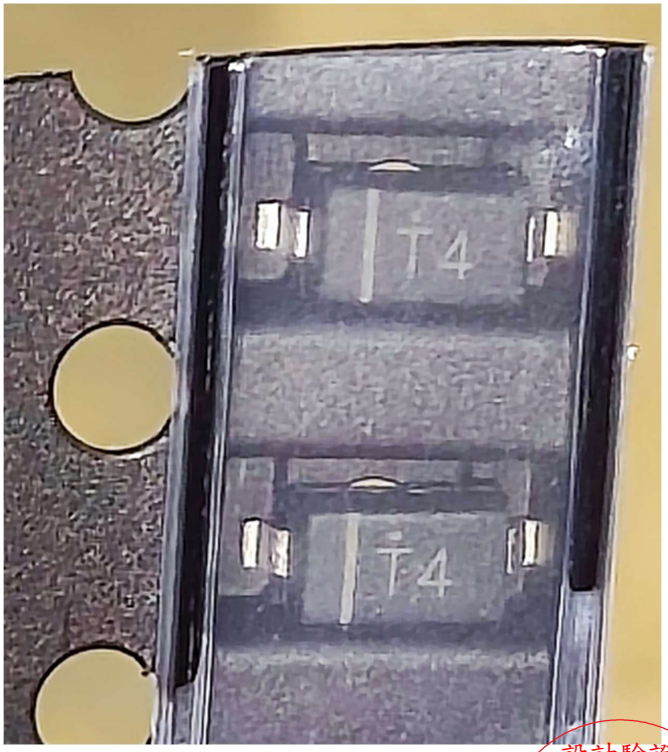


設計驗證
工程課
2024-04-16
發行
鈺緯科技開發股份有限公司

承　　認　　書

APPROVAL　SHEET

客戶名稱：	DIVA Laboratories, Ltd.
客戶料號：	DIVA PN:3D1N414802Y　Qisda PN:8C.04148.K1H (D0169)
零件敘述：	400mW High Speed Switching Diode
零件料號：	1N4148W-TP
零件廠牌：	MCC
承認日期：	2024.4.3

客戶認可章	晨昕公司發行章
設計驗證 工程課 2024 -04- 16 發行 鈺鎂科技開發股份有限公司	晨昕 發行章

SRT 晨昕科技股份有限公司
SUNRISETEK CO., LTD.

TEL:02-2226-7955　FAX:02-2221-3858

Features

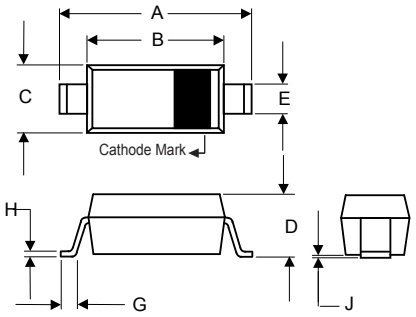
- High Conductance
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. “Green” Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance: 312.5°C/W Junction to Ambient

400mW High Speed Switching Diode

SOD-123



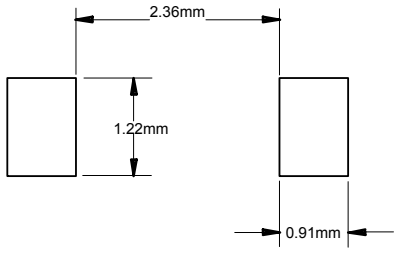
MCC Part Number	Device Marking
1N4148W	T4

Parameter	Symbol	Value
DC Reverse Voltage	V_R	100V
Working Peak Reverse Voltage	V_{RWM}	100V
RMS Reverse Voltage	$V_{R(RMS)}$	71V
Forward Continuous Current	I_{FM}	300mA
Repetitive PeakForward Surge Current	I_{FRM}	700mA
Average Rectified Output Current	I_O	150mA
Peak Forward Surge Current (t=1μs) (t=1s)	I_{FSM}	4A 1A
Power Dissipation	P_D	400mW

Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.100	0.112	2.55	2.85	
C	0.055	0.065	1.40	1.65	
D	----	0.053	----	1.35	
E	0.018	0.026	0.45	0.65	
G	0.006	----	0.15	----	
H	----	0.010	----	0.25	
J	----	0.006	----	0.15	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Forward Voltage	V_F	I_F=1mA			0.715	V
		I_F=10mA			0.855	V
		I_F=50mA			1	V
		I_F=150mA			1.25	V
Reverse Current	I_R	V_R=20V, T_J=25°C			25	nA
		V_R=75V, T_J=25°C			1	μA
		V_R=75V, T_J=150°C			50	μA
Junction Capacitance	C_J	V_R = 0V, f = 1MHz			2	pF
Reverse Recovery Time	t_{rr}	I_F=I_R=10mA, I_{rr}=0.1*I_R,R_L=100Ω			4	ns

* Pulse Test: Pulse Width 300 μsec, Duty Cycle 2%

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

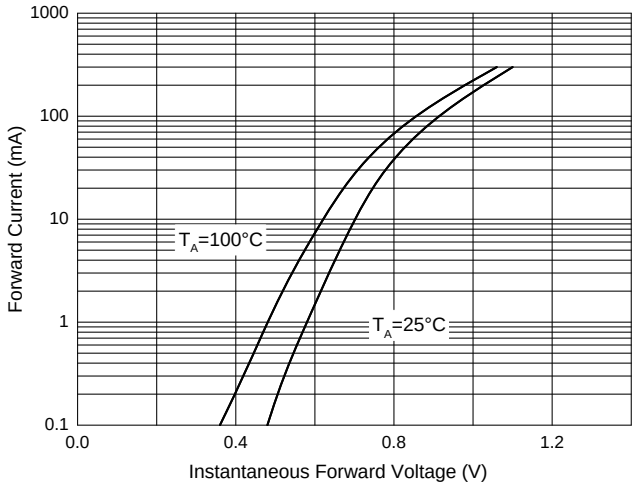


Fig. 2 - Typical Reverse Leakage Characteristics

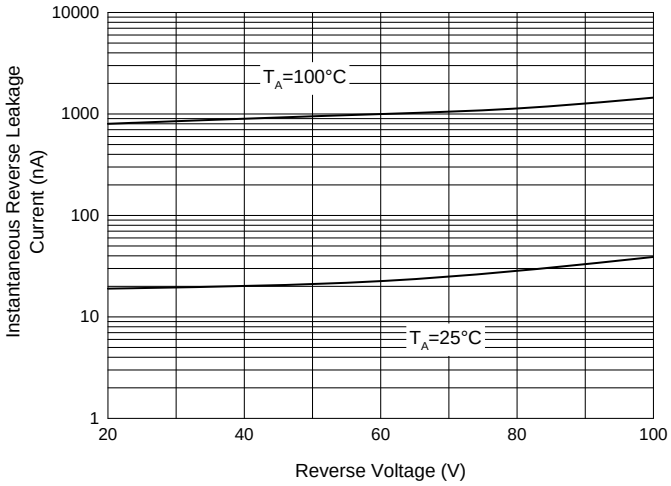
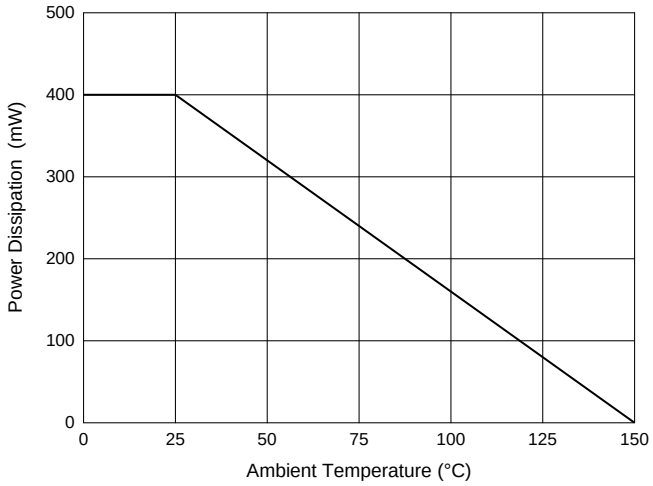


Fig. 3 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel
Part Number-13P	Tape&Reel: 10Kpcs/Reel

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