

Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Low Current Leakage
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

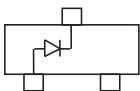
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 357°C/W Junction to Ambient

MCC Part Number	Device Marking	Non-Repetitive Peak Reverse voltage V_{RM}	Continuous Reverse Voltage V_R
MMBD4148HE3	KA2	100V	75V

Average Rectified Output Current	I_o	200mA	Resistive Load $f > 50\text{Hz}$
Peak Forward Surge Current	I_{FSM}	1A	$t=1\text{s, Non-Repetitive}$
Power Dissipation	P_{TOT}	350mW	

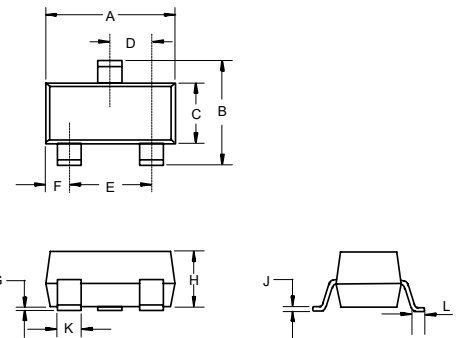
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



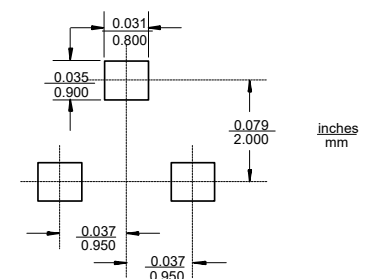
350mW 100 Volt Silicon Epitaxial Diode

SOT-23



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.014	0.020	0.35	0.51	
L	0.007	0.020	0.20	0.50	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

Maximum Instantaneous Forward Voltage	V_F	0.855V	$I_{FM}=100.0mA, T_j=25^\circ C$ (Note 2)
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA	$V_R=20V, T_j=25^\circ C$
Typical Junction Capacitance	C_J	2.0pF	$V_R=0.0V, f=1.0MHz$
Reverse Recovery Time	t_{rr}	4.0ns	$I_F=10mA, V_R=6V$ $R_L=100\Omega$

Note:2. Pulse test: Pulse width 300 μ sec, Duty cycle 2%

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

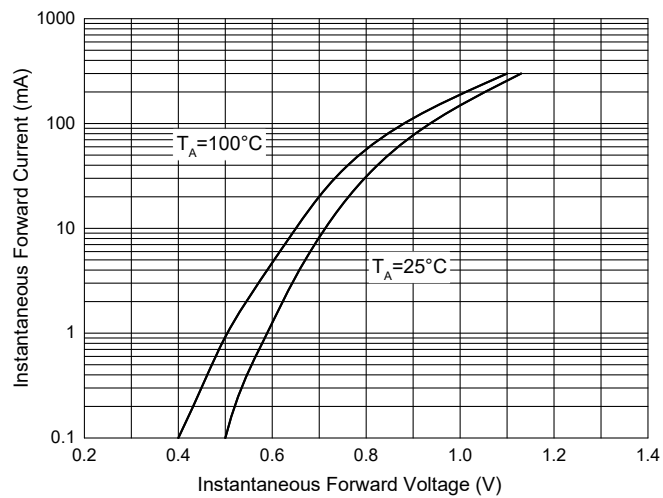


Fig. 2 - Typical Reverse Leakage Characteristics

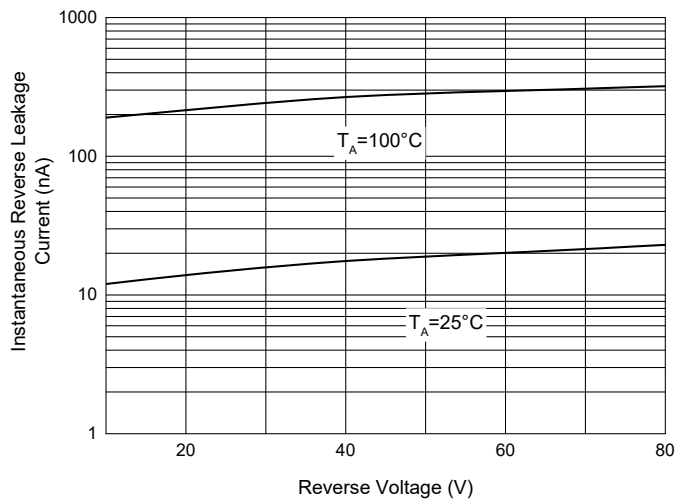
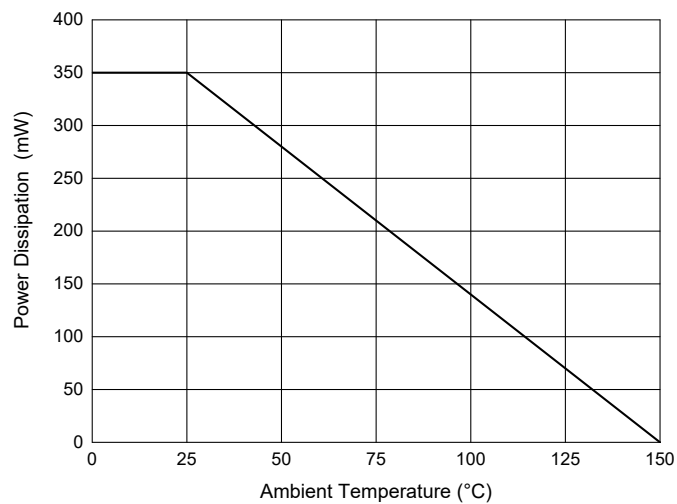


Fig. 3 - Power Derating Curve



Ordering Information

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

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