

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

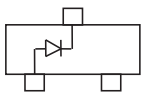
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 357°C/W Junction to Ambient

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	

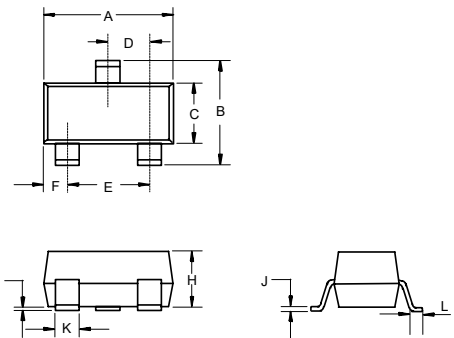
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



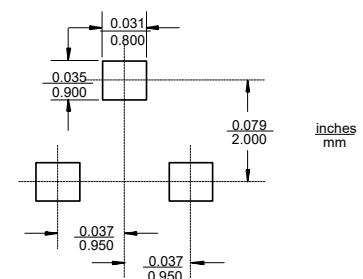
350mW 100 Volt Silicon Epitaxial Diode

SOT-23



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

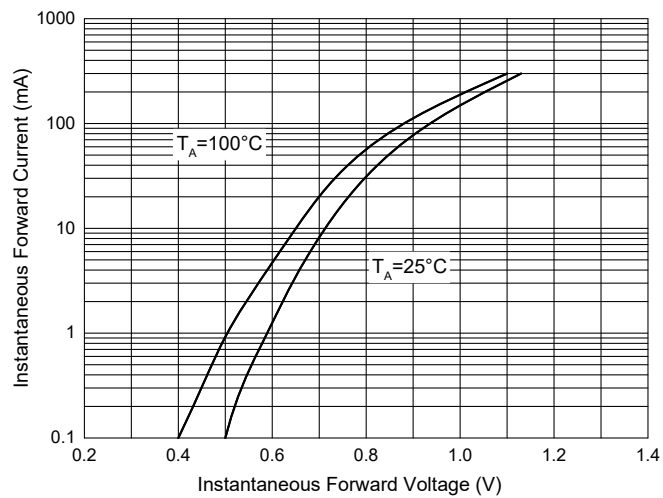


Fig. 2 - Typical Reverse Leakage Characteristics

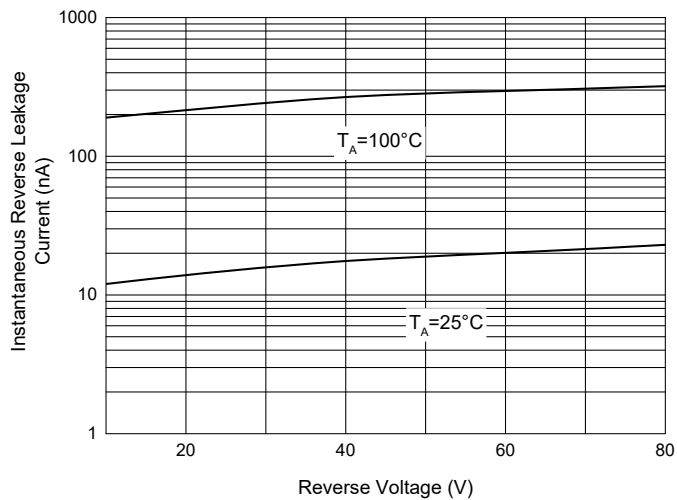
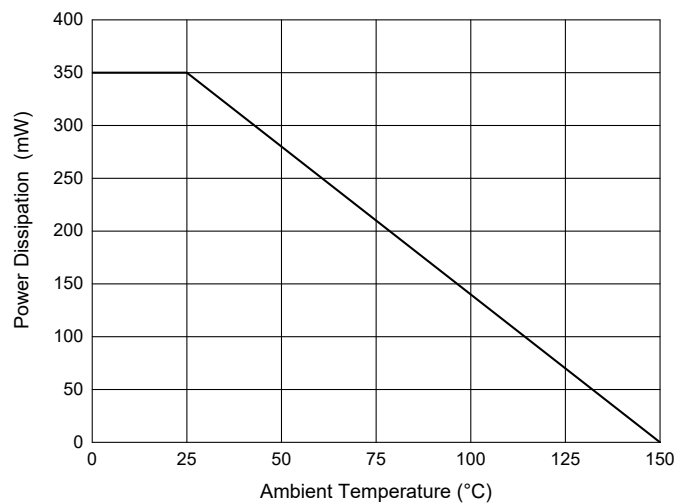


Fig. 3 - Power Derating Curve



Ordering Information

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

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