

Features

- Designed For Applications Requiring High Voltage Capability
- Low Current Leakage
- Small Outline Surface Mount Package
- Surface Mount Package Ideally Suited for Automatic Insertion
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating

Maximum Ratings

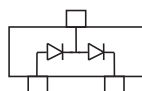
- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C

MCC Part Number	Device Marking	Non-Repetitive Peak Reverse voltage V_{RM}	Continuous Reverse Voltage V_R
MMBD2004S	B6D	300V	240V

Continuous Forward Current	I_F	225mA	
Peak Forward Surge Current	I_{FSM}	1A 4A	@ $t=1.0s$ @ $t=1.0\mu s$
Repetitive Peak Forward Current	I_{FRM}	625mA	
Power Dissipation	P_d	250mW	

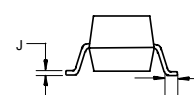
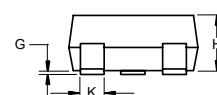
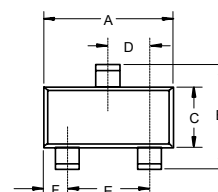
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



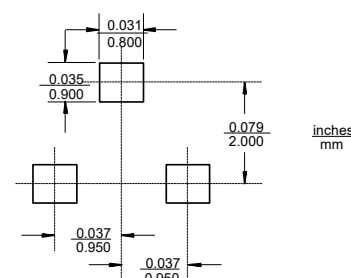
250mW 300Volt Dual Series Switching Diode

SOT-23



DIM	INCHES		MM		NOTE
	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

Minimum Reverse Breakdown Voltage	V_{BR}	240V	$I_R=100\mu A$
Maximum Instantaneous Forward Voltage	V_F	1.00V	$I_F=100.0mA$
Maximum Instantaneous Reverse Current	I_R	0.1 μA	$V_R=240V$
Maximum Junction Capacitance	C_D	5.0pF	$V_R=0.0V, f=1.0MHz$
Maximum Reverse Recovery Time	t_{rr}	50.0ns	$I_F=30mA, I_R=30mA$ $R_L=100\Omega$

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

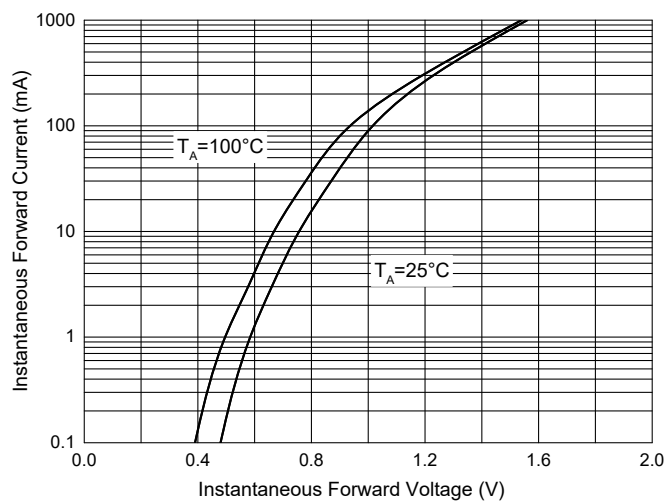


Fig. 2 - Typical Reverse Leakage Characteristics

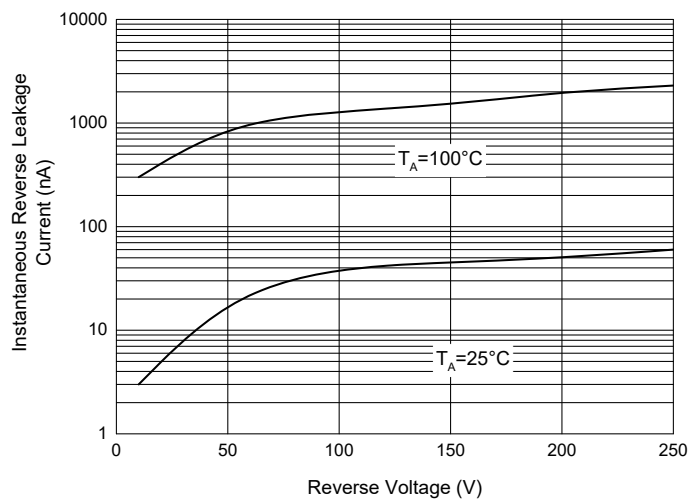
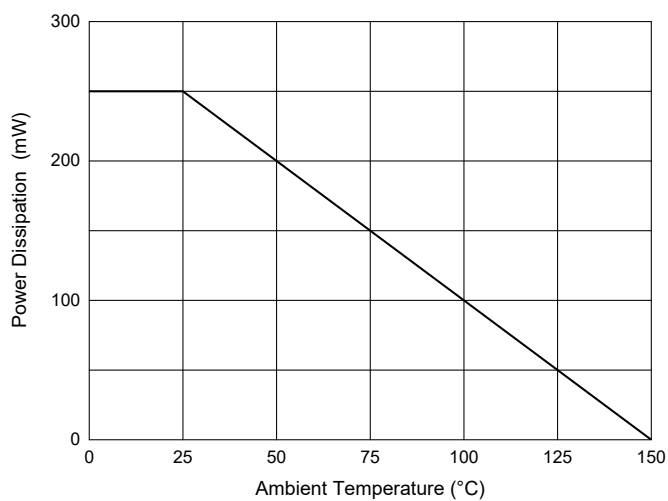


Fig. 3 - Power Derating Curve



Ordering Information

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

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