

Features

- High Conductance
- High Reverse Breakdown Voltage Rating
- Fast Switching Speed
- 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

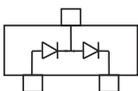
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 310°C/W Junction to Ambient

MCC Part Number	Device Marking	Peak Repetitive Reverse Voltage V_{RRM}	RMS Reverse Voltage $V_{R(RMS)}$	Continuous Reverse Voltage V_R
MMBD3004S	4P	350V	212V	240V

Continuous Forward Current	I_F	225mA	
Peak Forward Surge Current	I_{FSM}	1A 4A	@ t=1.0s @ t=1.0µs
Repetitive Peak Forward Current	I_{FRM}	625mA	
Power Dissipation	P_d	410mW	$T_A=25^\circ\text{C}$

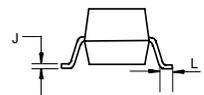
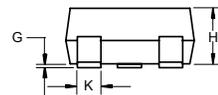
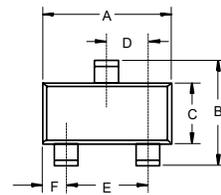
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



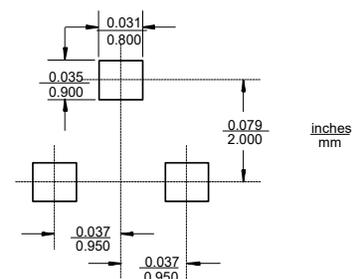
**410 mW
High Voltage
Switching Diode
240 Volts**

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

Minimum Reverse Breakdown Voltage	V_{BR}	350V	$I_R=150\mu A$
Maximum Instantaneous Forward Voltage	V_F	0.87V 1.00V 1.25V	$I_F=20.0mA$ $I_F=100.0mA$ $I_F=200.0mA$
Maximum Instantaneous Reverse Current	I_R	100nA 100 μA	$V_R=240V$ $V_R=240V, T_j=150^\circ C$
Maximum Junction Capacitance	C_J	5.0pF	$V_R=0.0V, f=1.0MHz$
Maximum Reverse Recovery Time	t_{rr}	50.0ns	$I_F=30mA, I_R=30mA$ $I_{rr}=3mA, R_L=100\Omega$

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

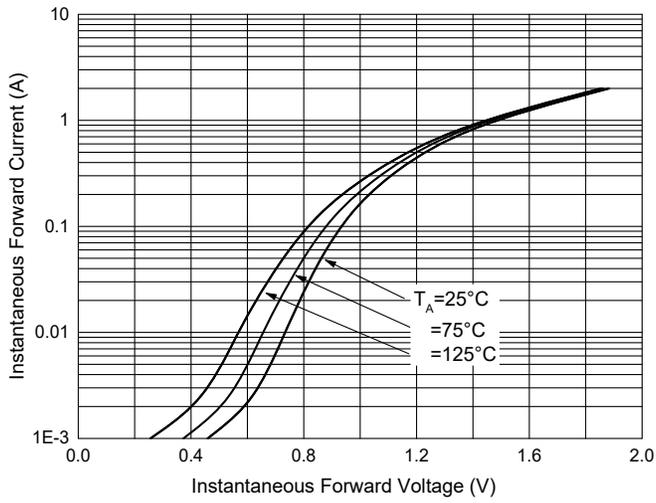


Fig. 2 - Typical Reverse Leakage Characteristics

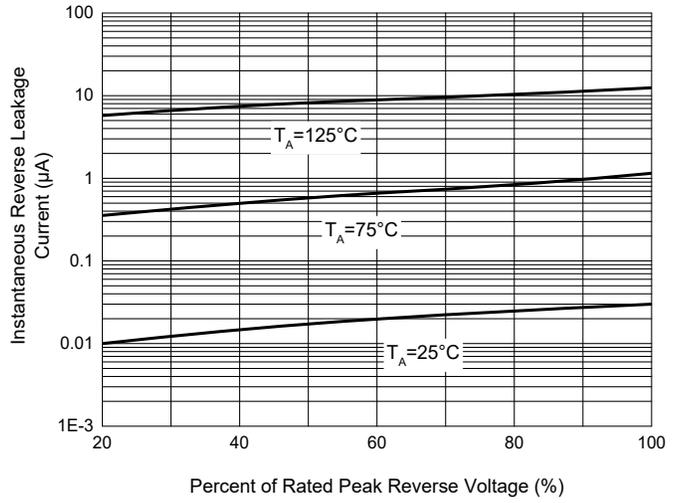
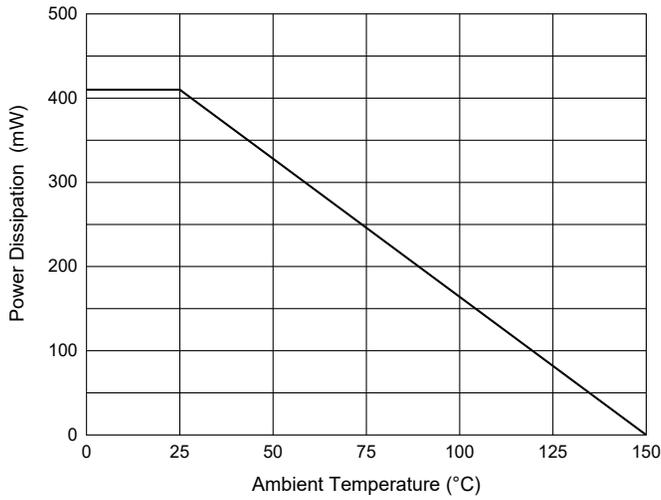


Fig. 3 - Power Derating Curve



Ordering Information

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

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