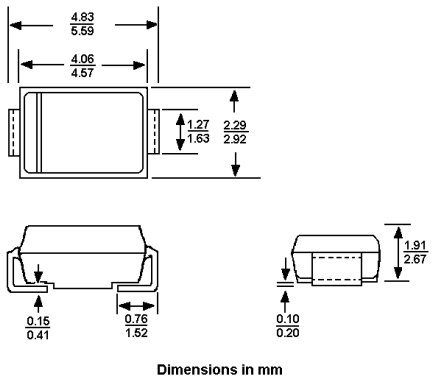
MBRA140T3

SURFACE MOUNT SCHOTTKY POWER RECTIFIER

SMA Power Surface Mount Package

...employing the Schottky Barrier principle in a large area metal-to-silicon power diode. State of the art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity diodes in surface mount applications where compact size and weight are critical to the system.

SMA



403D-01 Plastic Package

Features

- Small Compact Surface Mountable Package with J-Bent Leads
- Rectangular Package for Automated Handling
- Highly Stable Oxide Passivated Junction
- Very Low Forward Voltage Drop
- Guardring for Stress Protection

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 70 mg (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 260^{o}C Max. for 10 Seconds
- Shipped in 12 mm tape, 5000 units per 13 inch reel
- Polarity: Cathode Lead Indicated by Either Notch in Plastic Body or Polarity Band

Maximum Ratings and Characteristics @ 25 ? unless otherwise specified.

	Symbol	Value		Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40		V
Average Rectified Forward Current (At Rated V_R , T_C = 95^{O}C)	I_O	1		A
Peak Repetitive Forward Current (At Rated V_R , Square Wave, 20kH_Z, T_C = 100^{O}C)	I_{FRM}	2		A
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60H_Z)	I_{FSM}	30		A
Maximum Instantaneous Forward Voltage (Note 2)	V_F	T_J=25^{o}C	T_J=100^{o}C	Volts
at I_F=1A		0.55	0.505	
at I_F=2A		0.71	0.74	
Maximum Instantaneous Reverse Current	I_R	T_J=25^{o}C	T_J=100^{o}C	mA
at V_R=40V		0.5	10	
at V_R=20V		0.1	4	

	Symbol	Value	Unit
Thermal Resistance-Junction-to-Lead (Note 1) Thermal Resistance-Junction-to-Ambient (Note 1)	$R_{\theta JL}$ $R_{\theta JA}$	35 86	$^{O}C/W$
Operating Case and Storage Temperature Range	T_c ,T_S	-55 to +150	^{O}C
Operating Junction Temperature	T_J	-55 to +125	^{O}C
Voltage Rate of Change(Rated V_R, T_J=25^{O}C)	dv/dt	10,000	V/μs

Notes: 1. Mounted on 2"Square PC Board with 1"Square Total Pad Size, PC Board FR4.
2. Pulse Test: Pulse Width≤250μs, Duty Cycle≤ 2%.