

**Advance Information**

**Surface Mount**  
**Standard Recovery Power Rectifier**

**SMA Power Surface Mount Package**

Features construction with glass passivation. Ideally suited for surface mounted Automotive application

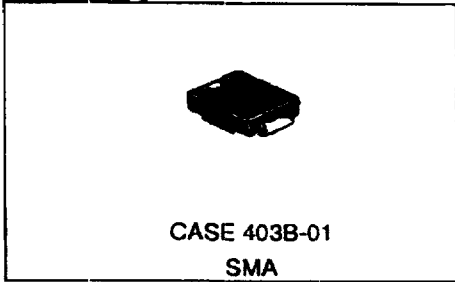
- Compact package with J-bend leads ideal for automated handling.
- Stable, high temperature, glass passivated junction

**Mechanical Characteristics:**

- Case: Molded epoxy.
- Epoxy meets UL94, VO at 1/8".
- 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°C max. for 10 seconds in solder bath.
- Polarity: Notch and Band in Plastic Body Indicates Cathode Lead
- Available in 12 mm tape, 5000 units per 13 inch reel, add "T3" suffix to part number.
- Marking: R14

**MRA4005T3**

**STANDARD RECOVERY  
RECTIFIER  
1 AMPERES  
600 VOLTS**



**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>rrm</sub>	600	V
Working Peak Reverse Voltage	V <sub>rwrm</sub>		
DC Blocking Voltage	V <sub>r</sub>		
Average Rectified Forward Current (At Rated V <sub>r</sub> , T <sub>i</sub> =150°C)	I <sub>o</sub>	1	A
Peak Repetitive Forward Current (At Rated V <sub>r</sub> , Square Wave, 20 kHz, T <sub>i</sub> =150°C)	I <sub>frm</sub>	2	A
Non-Repetitive Peak Surge Current (Surge applied at rated load conditions, halfwave, single phase, 60 Hz)	I <sub>fsm</sub>	30	A
Storage / Operating Case Temperature	T <sub>stg</sub> , T <sub>c</sub>	-55 to 150	°C
Operating Junction Temperature	T <sub>j</sub>	-55 to 175	°C

**THERMAL CHARACTERISTICS**

Thermal Resistance - Junction-to-Lead (2)	R <sub>θjl</sub>	16.2	°C/W
Thermal Resistance - Junction-to-Ambient (3)	R <sub>θja</sub>	88.3	

**ELECTRICAL CHARACTERISTICS**

Maximum Instantaneous Forward Voltage (1), see Figure 2 (I <sub>f</sub> =1 A) (I <sub>f</sub> =2 A)	V <sub>f</sub>	T <sub>j</sub> =25°C	T <sub>j</sub> =100°C	V
		1.1 1.18	1.04 1.12	
Maximum Instantaneous Reverse Current, see Figure 4 (V <sub>r</sub> =600 V) (V <sub>r</sub> =300 V)	I <sub>r</sub>	T <sub>j</sub> =25°C	T <sub>j</sub> =100°C	μA
		10 3	50 23	

Note: This data sheet contains advance information only and is subject to change without notice.

(1) Pulse Test: Pulse Width ≤ 250 μs, Duty Cycle ≤ 2%.

(2) minimum pad size

(3) 1 inch pad size

Updated 08/21/96

KMO TOSD 36x

Figure 1. Typical Forward Voltage

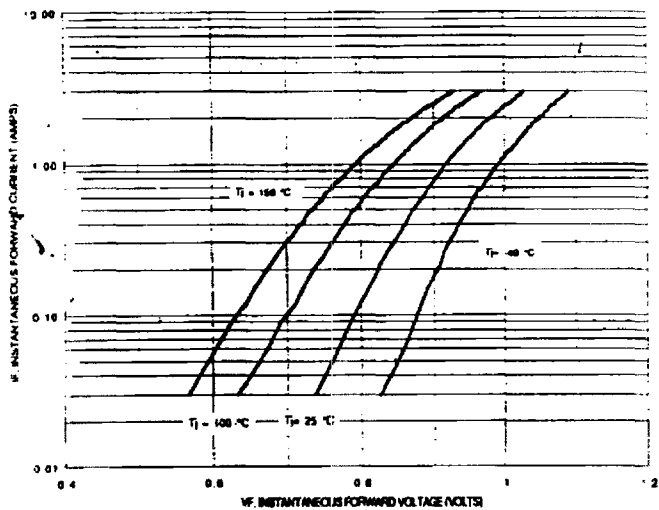


Figure 2. Maximum Forward Voltage

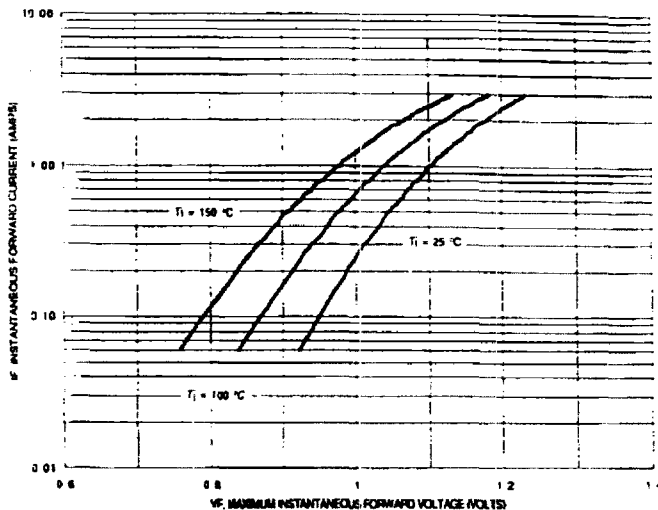


Figure 3. Typical Reverse Current

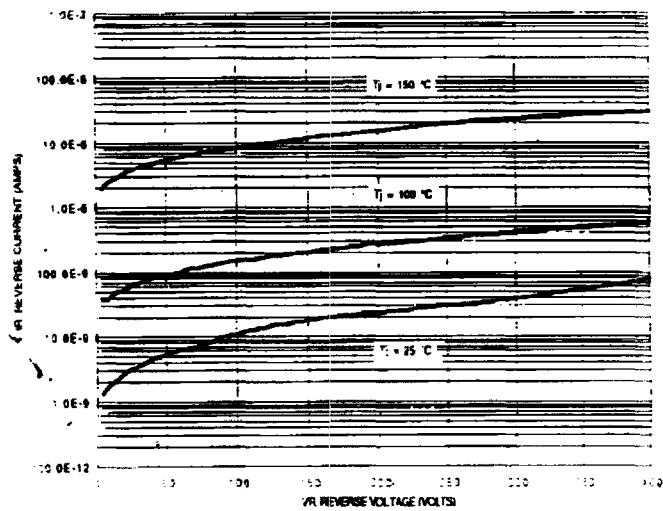


Figure 4. Maximum Reverse Current

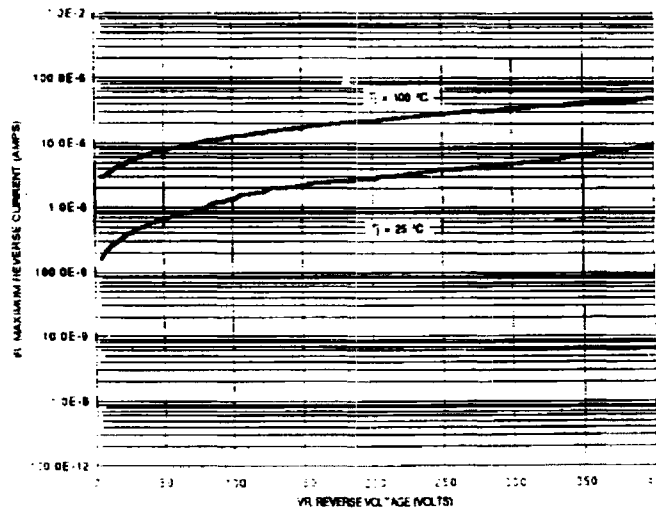


Figure 5. Current Derating Per Leg

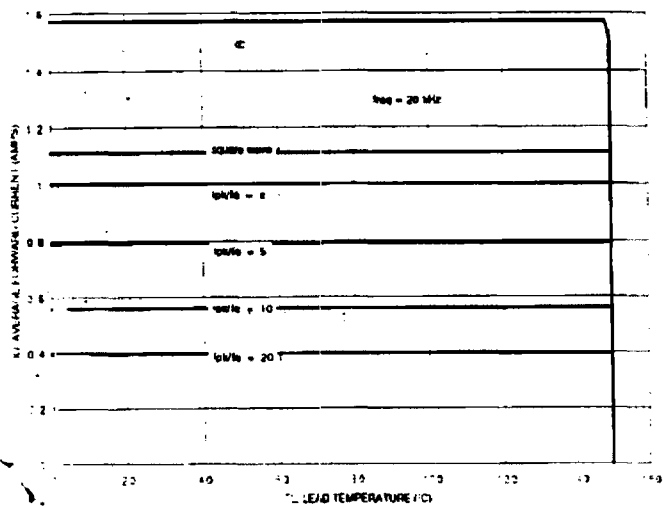


Figure 6. Forward Power Dissipation Per Leg

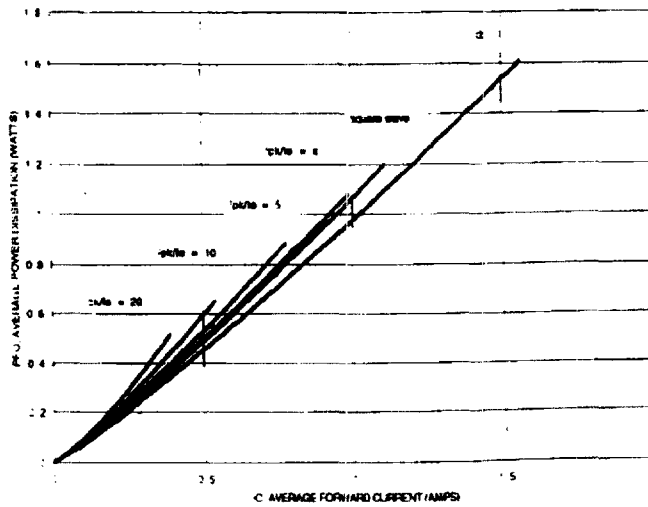


Figure 7. Capacitance

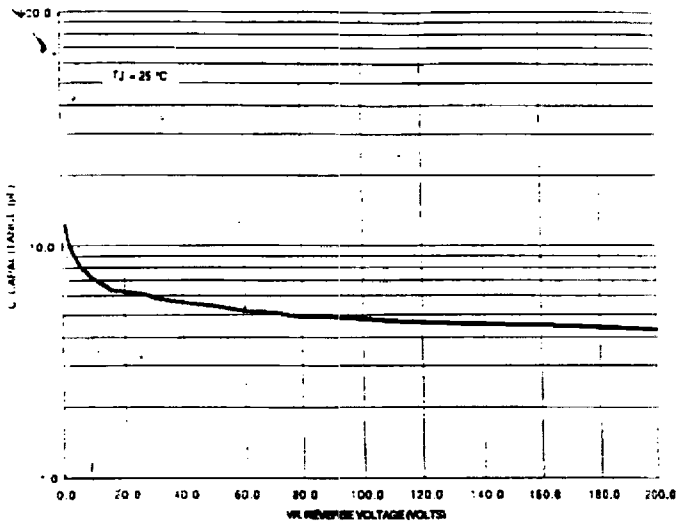


Figure 9. Thermal Response

