

MR5000 - MR5010

AUTOMOTIVE RECTIFIER DIODES

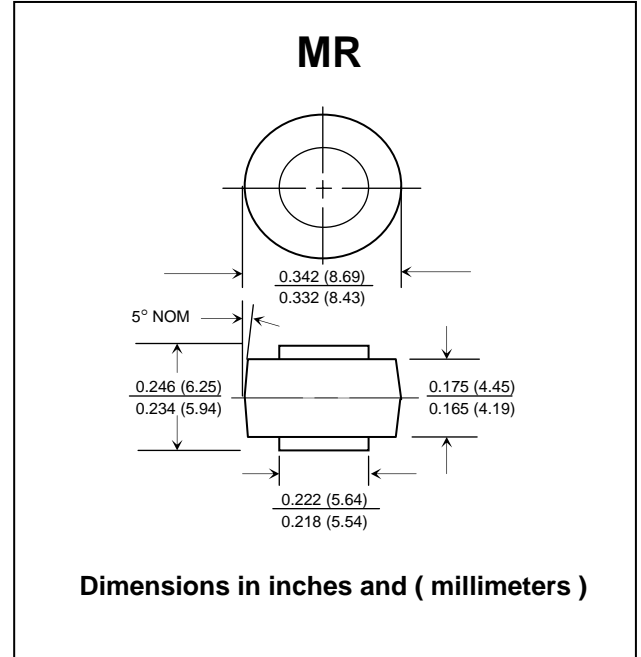
PRV : 50 - 1000 Volts
Io : 50 Amperes

FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Terminals : Terminal are readily solderable
- * Polarity : Cathode polarity band
- * Mounting position : Any
- * Weight : 1.624 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

RATING	SYMBOL	MR 5000	MR 5001	MR 5002	MR 5004	MR 5006	MR 5008	MR 5010	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Rectified Forward Current $T_c = 150^{\circ}C$	$I_{F(AV)}$	50							A
Maximum Peak Forward Surge Current Single half sine wave superimposed on rated load (JEDEC Method)	I_{FSM}	500							A
Maximum Forward Voltage at $I_F = 50$ A	V_F	1.1							V
Maximum DC Reverse Current $T_a = 25^{\circ}C$ at rated DC Blocking Voltage $T_a = 100^{\circ}C$	I_R	5.0							μA
	$I_{R(H)}$	1.0							mA
Thermal Resistance (Note 1)	$R_{\theta JC}$	0.8							$^{\circ}C/W$
Junction Temperature Range	T_J	- 65 to + 175							$^{\circ}C$
Storage Temperature Range	T_{STG}	- 65 to + 175							$^{\circ}C$

Note : (1) Thermal resistance from junction to case. Single side cooled.

RATING AND CHARACTERISTIC CURVES (MR5000 - MR5010)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

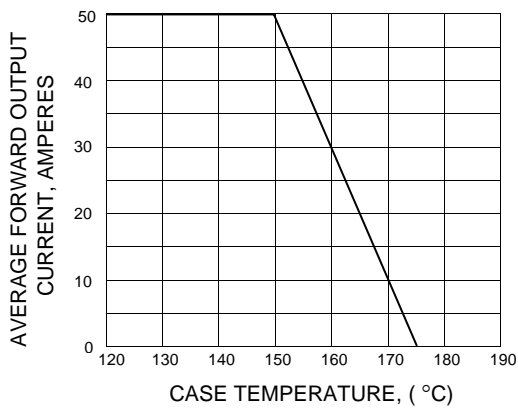


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

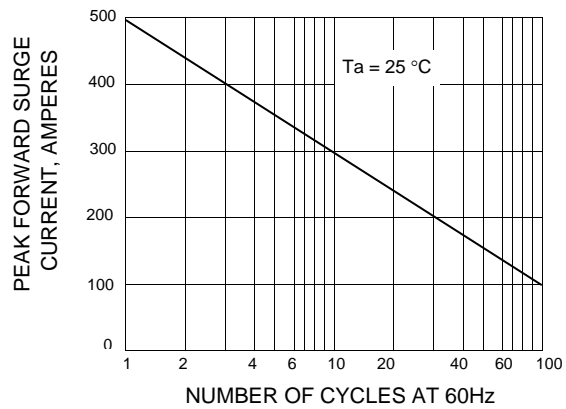


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

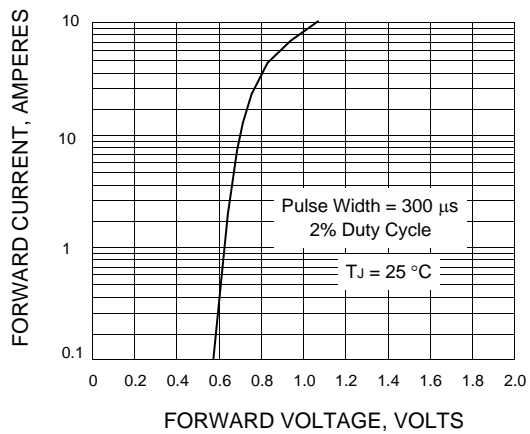


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

