

MR5000 - MR5010

AUTOMOTIVE RECTIFIER DIODES

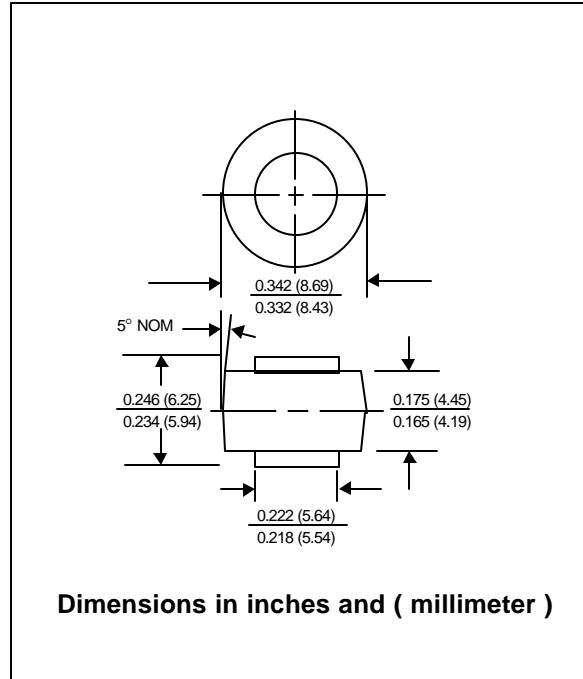
PRV : 50 - 1000 Volts
Io : 50 Amperes

FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop

MECHANICAL DATA :

- * Case : Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Terminals : Terminal are readily solderable
- * Polarity : Cathode polarity band
- * Mounting position : Any
- * Weight : 1.8 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	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Average Rectified Forward Current T _C = 150°C	I _{F(AV)}	50							Amps.
Peak Forward Surge Current Single half sine wave superimposed on rated load (JEDEC Method)	I _{FSM}	500							Amps.
Maximum Forward Voltage at I _F = 50 Amps.	V _F	1.1							Volts
Maximum DC Reverse Current T _a = 25 °C at rated DC Blocking Voltage T _a = 100 °C	I _R	5.0							μA
	I _{R(H)}	1.0							mA
Thermal Resistance (Note 1)	R _{θJC}	0.8							°C/W
Junction Temperature Range	T _J	- 65 to + 175							°C
Storage Temperature Range	T _{STG}	- 65 to + 175							°C
Marking Code									

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

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RATING AND CHARACTERISTIC CURVES (MR5000 - MR5010)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

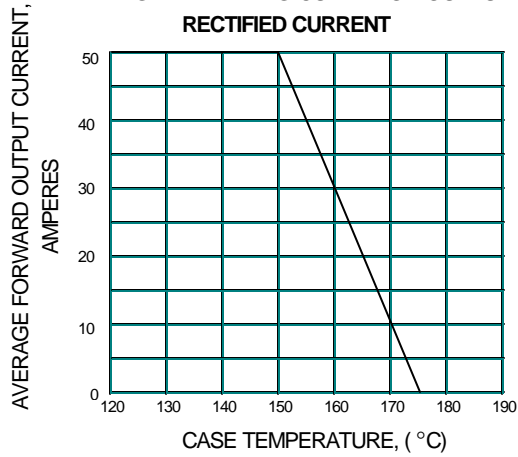


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

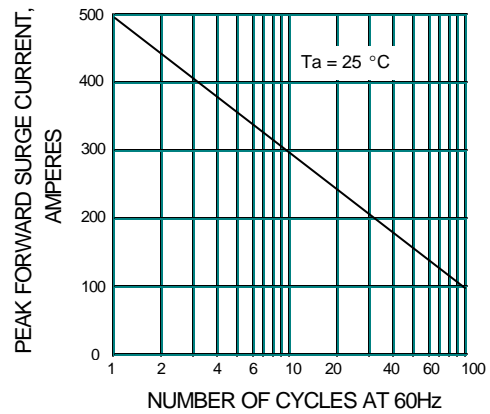


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

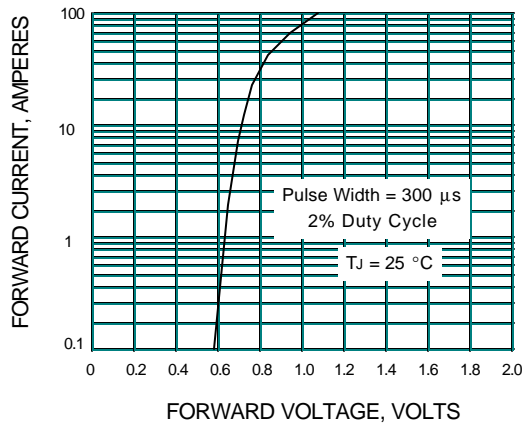


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

