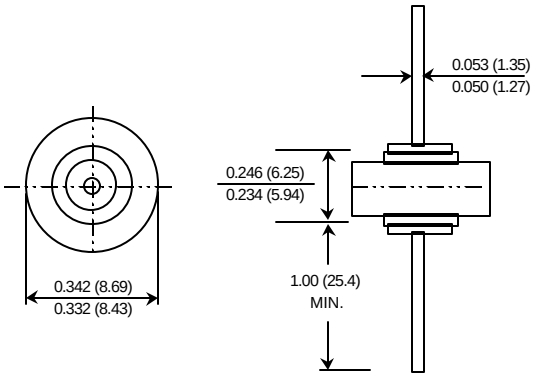
MR5000L - MR5010L

AUTOMOTIVE RECTIFIER DIODES

PRV : 50 - 1000 Volts
Io : 50 Amperes

MR - L



Dimensions in inches and (millimeter)

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
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Cathode polarity band
* Mounting position : Any
* Weight : 2.69 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 5000L	MR 5001L	MR 5002L	MR 5004L	MR 5006L	MR 5008L	MR 5010L	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 Tc = 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 Ta = 25 °C	I_R	5.0							µA
at rated DC Blocking Voltage Ta = 100 °C	$I_{R(H)}$	1.0							mA
Thermal Resistance (Note 1)	$R_{\theta JC}$	0.8							°C/W
Junction Temperature Range	T_J	- 65 to + 175							°C
Storage Temperature Range	T_{STG}	- 65 to + 175							°C

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

UPDATE : APRIL 23, 1998

RATING AND CHARACTERISTIC CURVES (MR5000L - MR5010L)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

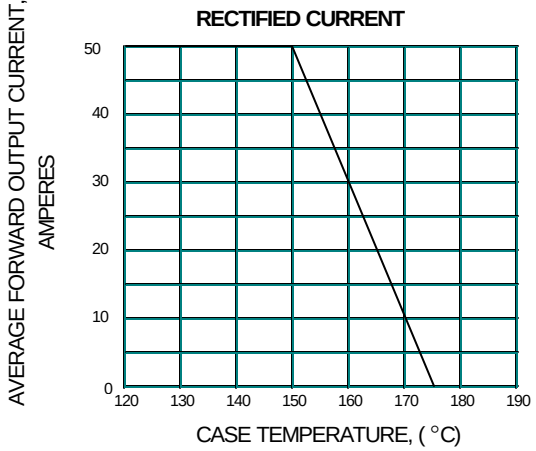


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

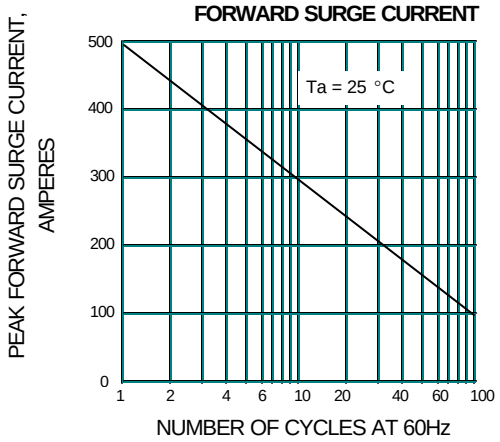


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

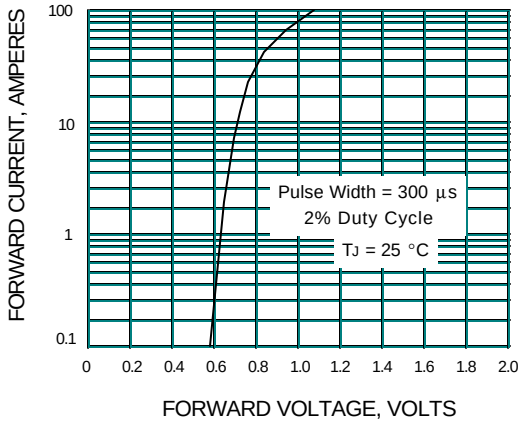
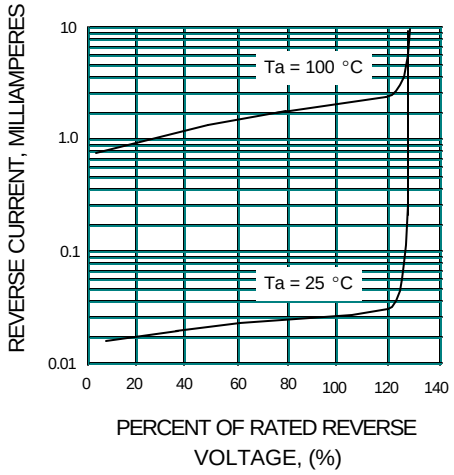



FIG.4 - TYPICAL REVERSE CHARACTERISTICS