

AR5000L - AR5012L

PRV : 50 - 1200 Volts

Io : 50 Amperes

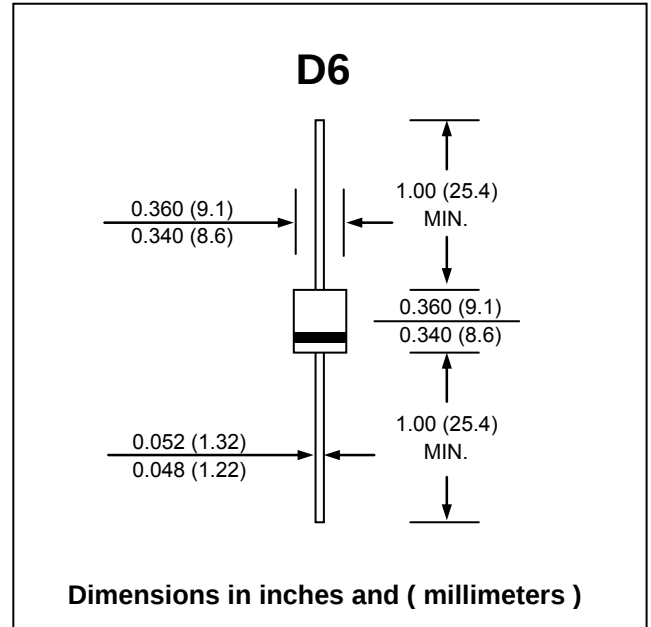
FEATURES :

- * 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
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 2.049 grams

AUTOMOTIVE RECTIFIER DIODES



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	AR 5000L	AR 5001L	AR 5002L	AR 5004L	AR 5006L	AR 5008L	AR 5010L	AR 5012L	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	1200	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	840	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	1200	V
Average Rectified Forward Current $T_c = 150\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	50								A
Peak Forward Surge Current Single half sine wave superimposed on rated load (JEDEC Method)	I_{FSM}	500								A
Maximum Forward Voltage at $I_F = 50\text{ Amps.}$	V_F	1.1								V
Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$ at rated DC Blocking Voltage $T_a = 100\text{ }^{\circ}\text{C}$	I_R	5.0								μA
	$I_{R(H)}$	1.0								mA
Thermal Resistance (Note 1)	$R_{\theta JC}$	0.8								$^{\circ}\text{C/W}$
Junction Temperature Range	T_J	- 65 to + 175								$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 175								$^{\circ}\text{C}$

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

RATING AND CHARACTERISTIC CURVES (AR5000L - AR5012L)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

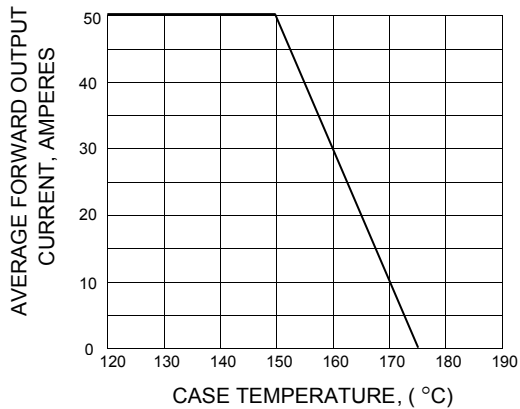


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

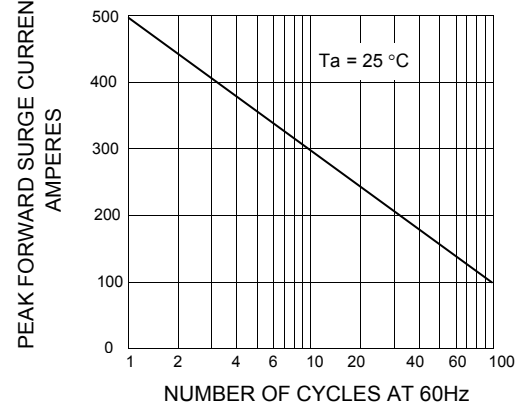


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

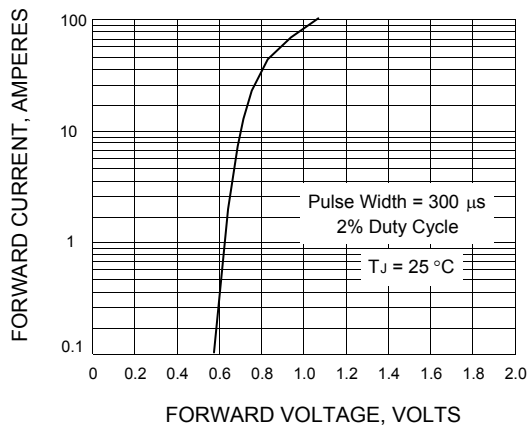


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

