

### AUTOMOTIVE RECTIFIER

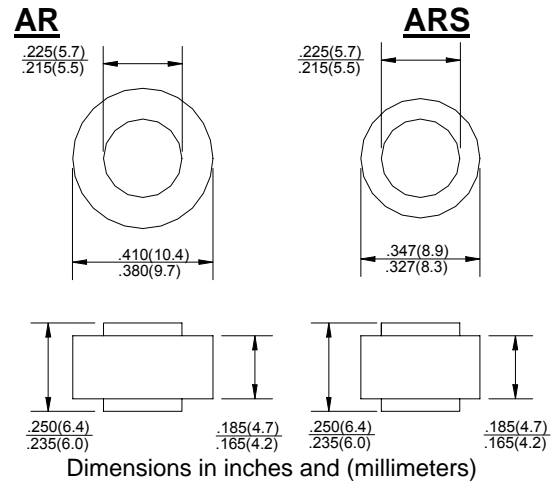
VOLTAGE RANGE: 50 --- 1000 V  
CURRENT: 25 A

#### FEATURES

- ◇ Utilizing void-free molded plastic technique
- ◇ Low power loss
- ◇ High surge capability
- ◇ High temperature soldering guaranteed:  
265°C/10s

#### MECHANICAL DATA

- ◇ Case: Molded with UL-94 class V-O recognized flame retardant epoxy
- ◇ Terminals: Plated axial terminals solderable per MIL-STD-202E, method 208
- ◇ Polarity: Color ring denotes cathode



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

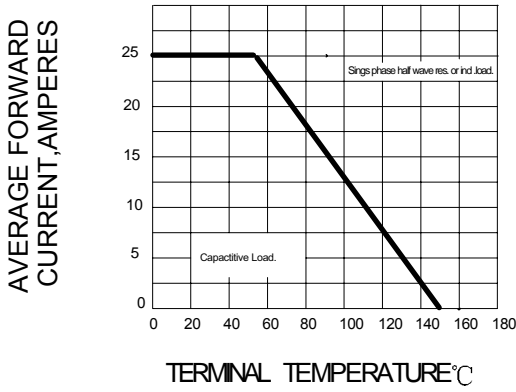
		AR	AR	AR	AR	AR	AR	AR	UNITS
		2505	251	252	254	256	258	2510	
		ARS	ARS	ARS	ARS	ARS	ARS	ARS	
		2505	251	252	254	256	258	2510	
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current @ $T_A=55^\circ\text{C}$	$I_{(AV)}$	25.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	$I_{FSM}$	400							A
Maximum instantaneous forward voltage at 25 A	$V_F$	1.0							V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=150^\circ\text{C}$	$I_R$	10.0 1000							$\mu\text{A}$
Typical junction capacitance (Note1)	$C_J$	300							pF
Typical thermal resistance (Note2)	$R_{\theta JC}$	1							$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_j$	- 55 ---- + 150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 55 ---- + 150							$^\circ\text{C}$

NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

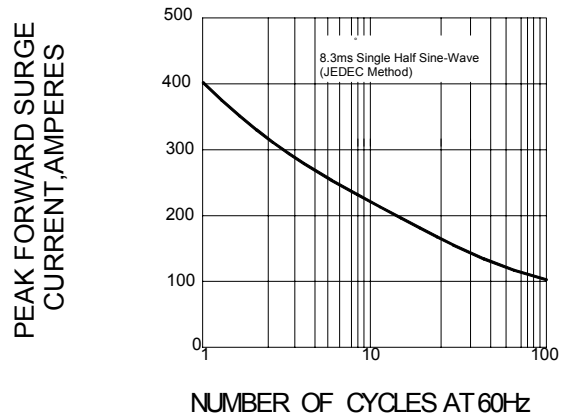
2. Thermal resistance from junction to case.

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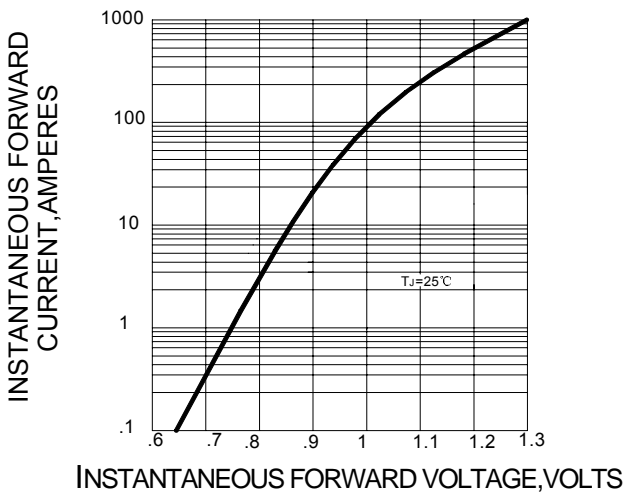
**FIG.1 – FORWARD CURRENT DERATING CURVE**



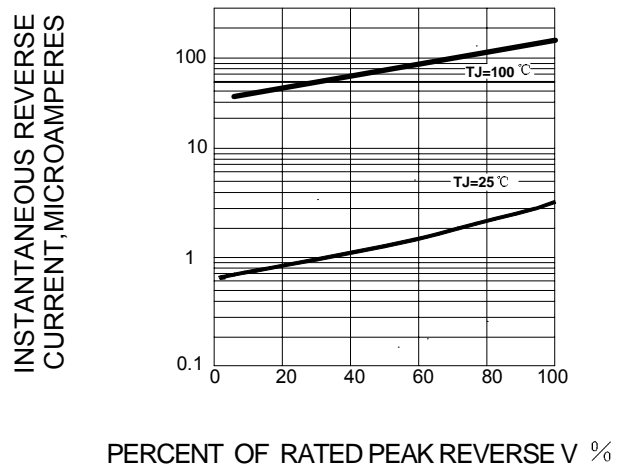
**FIG.2 – PEAK FORWARD SURGE CURRENT**



**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**

