

AUTOMOTIVE RECTIFIER

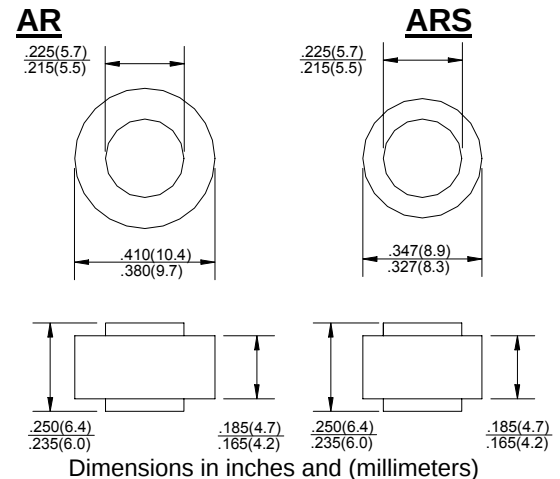
VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 25 A

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 2505	AR 251	AR 252	AR 254	AR 256	AR 258	AR 2510	UNITS
		ARS 2505	ARS 251	ARS 252	ARS 254	ARS 256	ARS 258	ARS 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							μA
Typical junction capacitance (Note1)	C_J	300							pF
Typical thermal resistance (Note2)	$R_{\theta JC}$	1							$^\circ\text{C/W}$
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

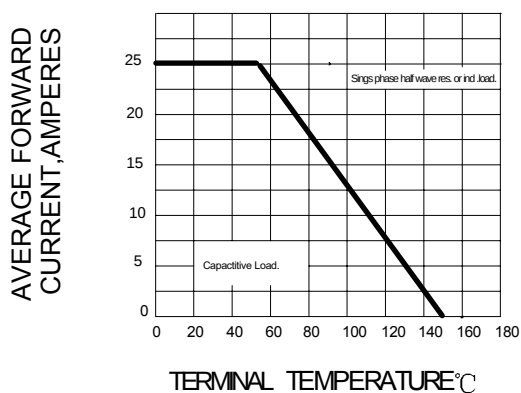


FIG.2 – PEAK FORWARD SURGE CURRENT

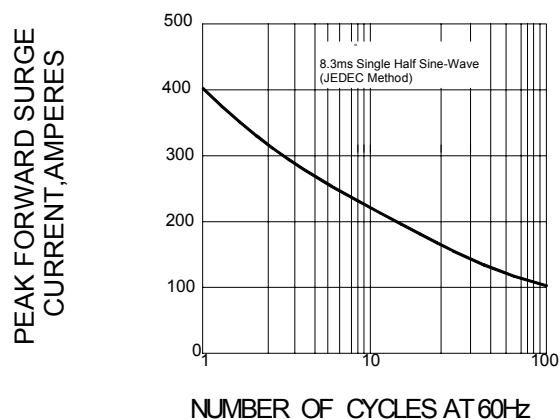


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

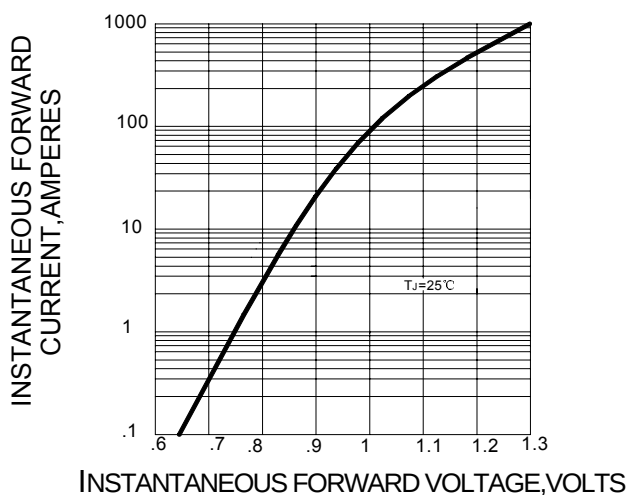


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

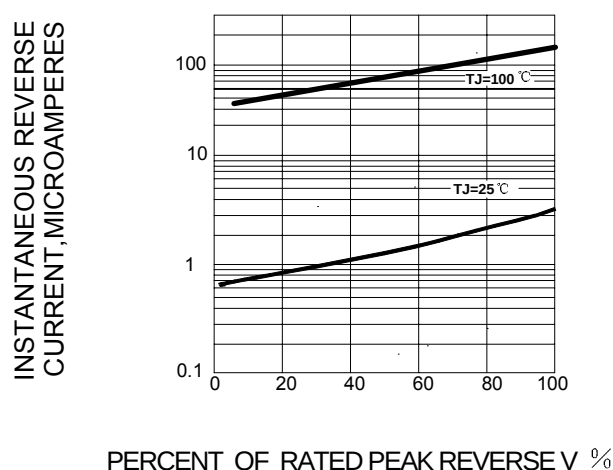


FIG.5 – TYPICAL JUNCTION CAPACITANCE

