

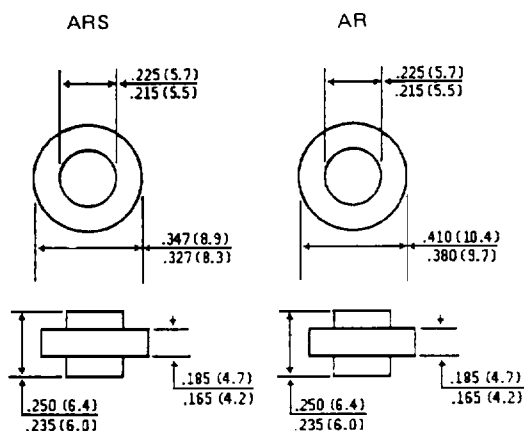
BUTTON TYPE AUTOMOTIVE RECTIFIERS ARS 25/AR 25 SERIES

HIGH CURRENT PLASTIC SILICON RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 25.0 Amperes

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Diffused junction
- ◆ Low leakage at elevated temperature – 250 μ A @ T_c=100°C
- ◆ High surge capability – 400 Amperes @ T_J=150°C
- ◆ High performance at elevated temperature – 25 Amperes @ T_c=150°C
- ◆ High temperature soldering guaranteed: 250°C for 10 seconds



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: Transfer, molded plastic case
Terminals: Plated terminals, solderable per MIL-STD-202, Method 208
Polarity: Color Ring denotes cathode end
Weight: 0.07 ounce, 1.8 gram
Mounting Position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified
 Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

	SURGE PART NUMBER	ARS251 AR251	ARS252 AR252	ARS253 AR253	ARS254 AR254	ARS255 AR255	ARS256 AR256	ARS257 AR257	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{HRM}	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
Maximum Average Forward Rectified Current .375", (4.5mm) lead lengths at T _c = 150°C	I(AV)	25.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T _J =150°C	I _{FSM}	400							Amps
Maximum Instantaneous Forward Voltage at 25.0A	V _F	1.0							Volts
Maximum DC Reverse Current T _C =25°C at Rated DC Blocking Voltage T _C =100°C	I _R	5.0							μ A
Typical Reverse Recovery Time (Note 2)	T _{RR}	3.0							μ S
Typical Junction Capacitance (Note 1) T _J =25°C	C _J	300							pf
Typical Thermal Resistance (Note 3)	R θ JC	1.0							°C/W
Operating and Storage Temperature Range,	T _J , T _{STG}	-50 to + 150							°C
Polarity and Voltage Denotation Color Band		Red	Yellow	Silver	Orange	Green	Blue	Violet	

NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 V_{DC}.
2. Reverse Recovery Test Conditions : I_F= 0.5A, I_R=1.0A, I_{rr} = .25A.
3. Thermal Resistance from Junction to Case, single side cooled.

AUTOMOTIVE RECTIFIERS

RATINGS AND CHARACTERISTIC CURVES ARS25/AR25 SERIES

FIG. 1—MAXIMUM FORWARD CURRENT DERATING CURVE

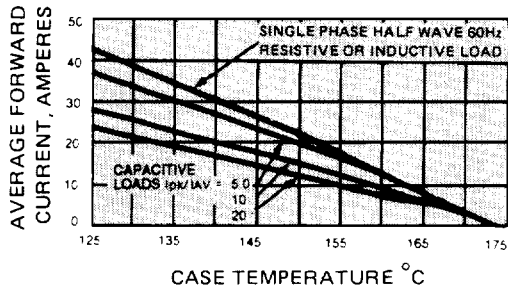


FIG. 2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

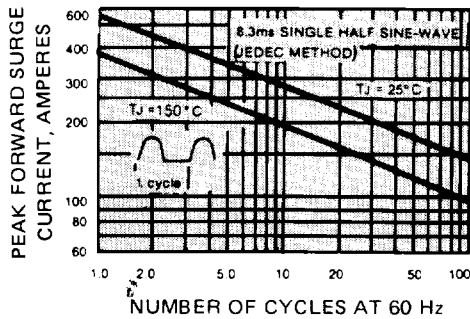


FIG. 5 –TYPICAL JUNCTION CAPACITANCE

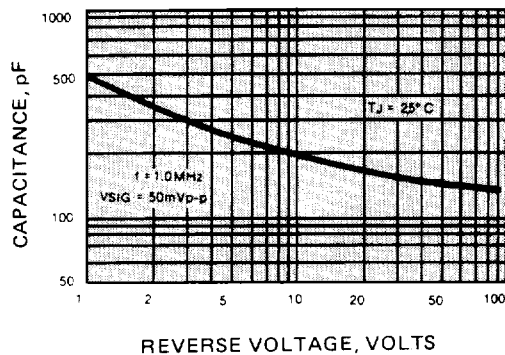
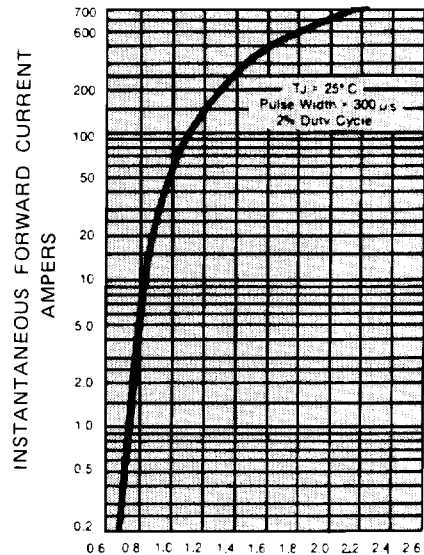


FIG. 3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG. 4 – TYPICAL REVERSE CHARACTERISTICS

