TAIWAN SEMICONDUCTOR

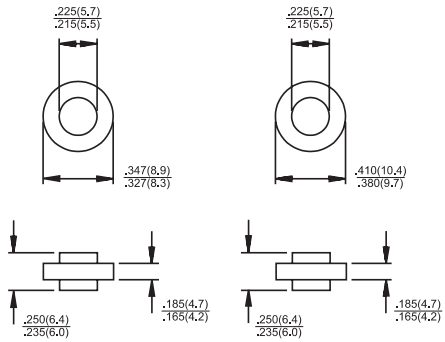
RoHS COMPLIANCE

AR(S)35 SERIES

35.0 AMPS. High Current Button Rectifiers

ARS **AR**





Dimensions in inches and (millimeters)

Features

- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✧ Low cost construction utilizing void-free molded plastic technique
- ✧ Low cost
- ✧ Diffused junction
- ✧ Low leakage
- ✧ High surge capability
- ✧ High temperature soldering guaranteed: 260°C for 10 seconds

Mechanical Data

- ✧ Case: Molded plastic case
- ✧ Terminals: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208
- ✧ Polarity: Color ring denotes cathode
- ✧ Weight: 0.07 ounce, 1.8 grams
- ✧ Mounting position: Any

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%

Type Number	Symbol	ARS 35A / AR 35A	ARS 35B / AR 35B	ARS 35D / AR 35D	ARS 35G / AR 35G	ARS 35J / AR 35J	ARS 35K / AR 35K	ARS 35M / AR 35M	Units
Maximum Recurrent Peak Revere 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 @Tc = 150°C	$I_{(AV)}$	35							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) at T_J=150°C	I_{FSM}	500							A
Maximum Instantaneous Forward Voltage @ 35A	V_F	1.0							V
Maximum DC Reverse Current @ Tc=25°C at Rated DC Blocking Voltage @ Tc=125°C	I_R	5.0 250							uA uA
Typical Reverse Recovery Time (Note 2)	Trr	3.0							uS
Typical Junction Capacitance (Note 1) T_J=25°C	Cj	300							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	1.0							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-50 to +175							°C

Notes:
1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
2. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
3. Thermal Resistance from Junction to Case, Singe Side Cooled.

RATINGS AND CHARACTERISTIC CURVES (AR(S)35 SERIES)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

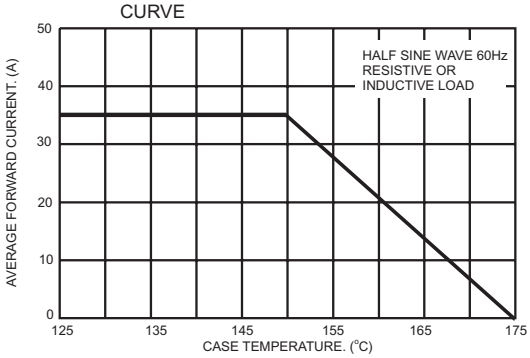


FIG.2- TYPICAL REVERSE CHARACTERISTICS

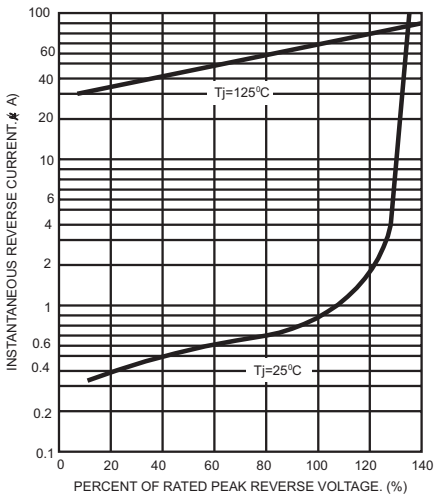


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

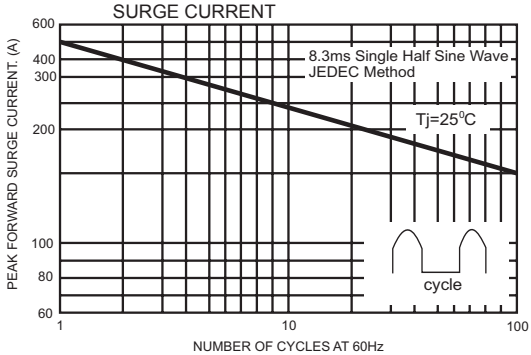


FIG.4- TYPICAL JUNCTION CAPACITANCE

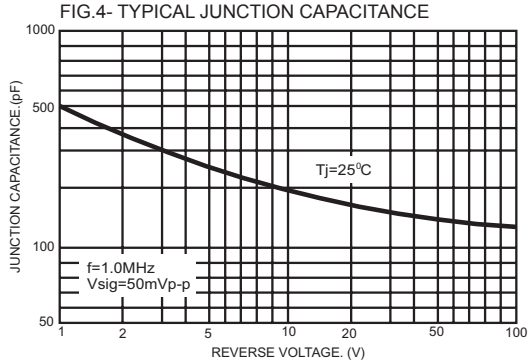


FIG.5- TYPICAL FORWARD CHARACTERISTICS

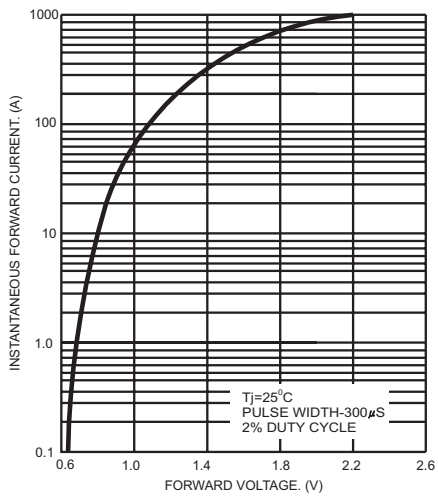


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

