

## High Current Button Rectifiers

### FEATURES

- Diffused junction
- Low leakage
- High surge capability
- Low cost construction utilizing void-free molded plastic technique
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



ARS



### MECHANICAL DATA

#### Case: ARS

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

**Weight:** 1.68 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)									
PARAMETER	SYMBOL	ARS 35A	ARS 35B	ARS 35D	ARS 35G	ARS 35J	ARS 35K	ARS 35M	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	35							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	500							A
Maximum instantaneous forward voltage (Note 1) @ 35 A	V <sub>F</sub>	1.0							V
Maximum reverse current @ Rated VR T <sub>J</sub> =25 °C T <sub>J</sub> =125 °C	I <sub>R</sub>	5							μA
		250							
Typical reverse recovery time (Note 2)	trr	3							μs
Typical junction capacitance (Note 3)	C <sub>j</sub>	300							pF
Typical Thermal Resistance	R <sub>θJC</sub>	1							°C/W
Operating junction temperature range	T <sub>J</sub>	- 50 to +175							°C
Storage temperature range	T <sub>STG</sub>	- 50 to +175							°C

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Reverse Recovery Time Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
ARS35x (Note 1)	B0	G	ARS	1,000 / Bulk packing

Note 1: "x" defines voltage from 50V (ARS35A) to 1000V (ARS35M)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
ARS35M B0	ARS35M	B0		
ARS35M B0G	ARS35M	B0	G	Green compound

## RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

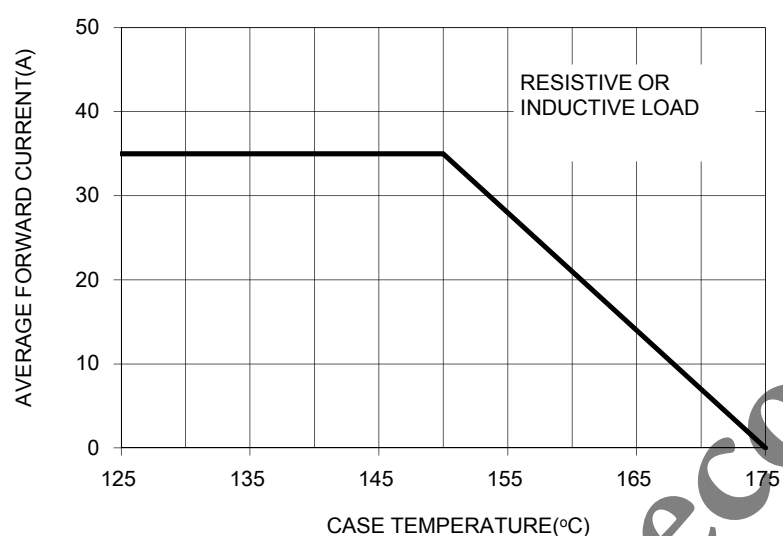


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

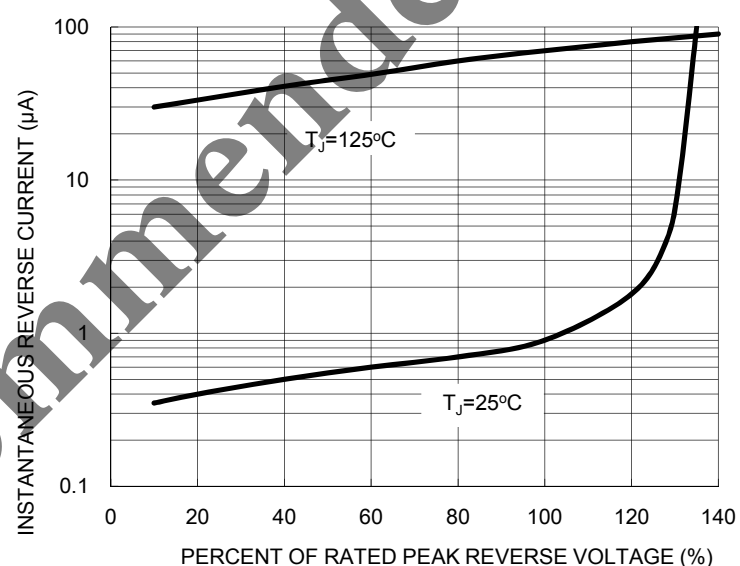


FIG. 3 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

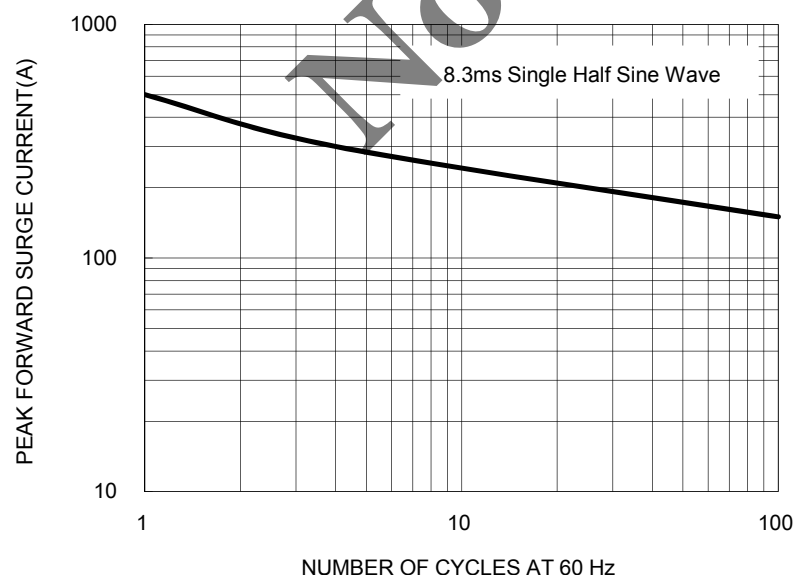


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

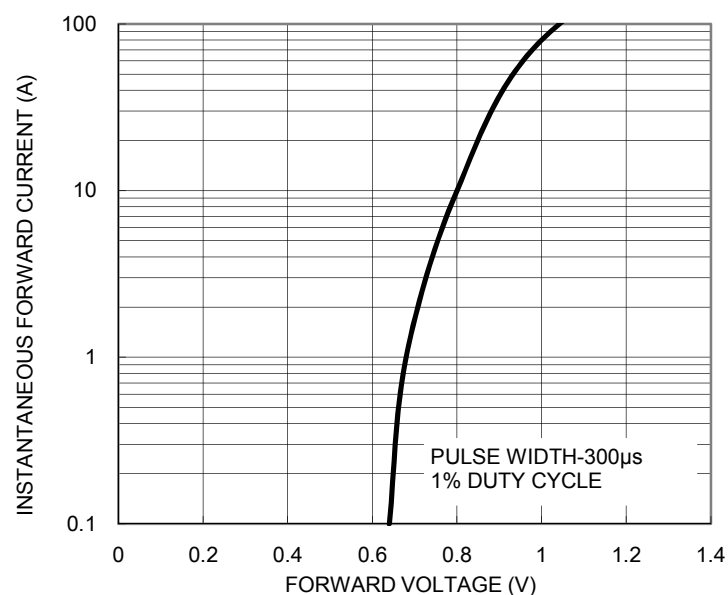


FIG. 5 TYPICAL JUNCTION CAPACITANCE

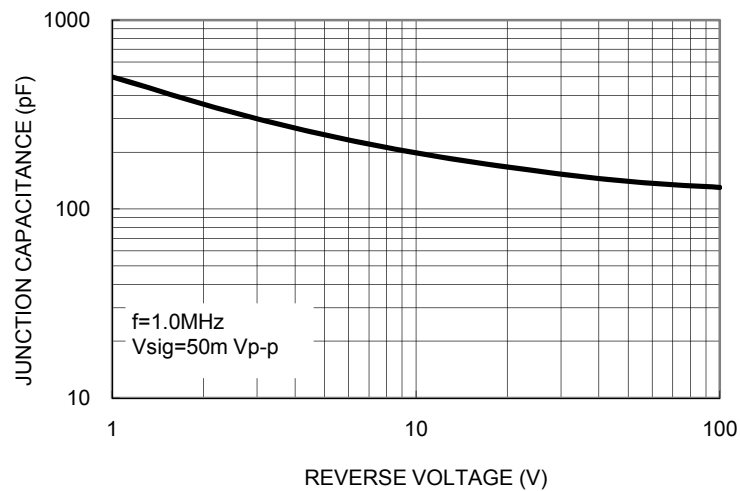
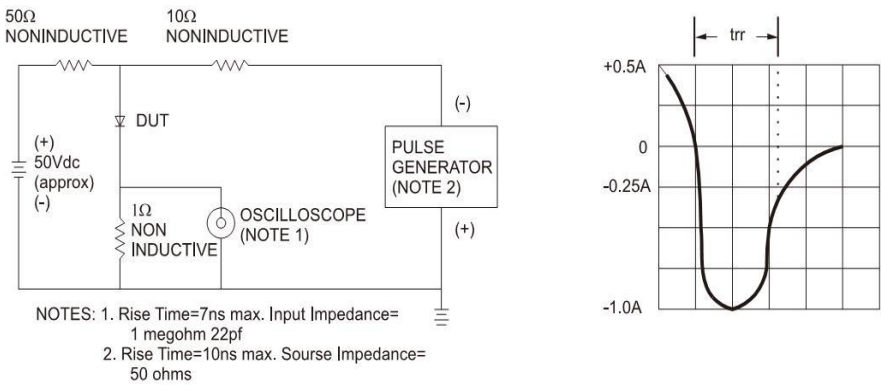
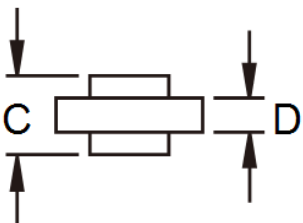


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



PACKAGE OUTLINE DIMENSIONS

ARS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	5.50	5.70	0.217	0.224
B	8.30	8.90	0.327	0.350
C	6.00	6.40	0.236	0.252
D	4.20	4.70	0.165	0.185

MARKING DIAGRAM



P/N = Specific Device Code  
G = Green Compound  
YW = Date Code  
F = Factory Code

**Not Recommended**

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