

## 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


**AR**


### MECHANICAL DATA

**Case: AR**

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:** 1.8 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise noted)									
PARAMETER	SYMBOL	AR 25A	AR 25B	AR 25D	AR 25G	AR 25J	AR 25K	AR 25M	UNIT
Maximum repetitive 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	$I_{F(AV)}$				25				A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$				400				A
Maximum instantaneous forward voltage (Note 1) @ 25 A	$V_F$				1.0				V
Maximum reverse current @ Rated VR $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	$I_R$			5			250		$\mu\text{A}$
Typical reverse recovery time (Note 2)	$trr$			3					$\mu\text{s}$
Typical junction capacitance (Note 3)	$C_J$			300					pF
Typical Thermal Resistance	$R_{eJC}$			1					$^\circ\text{C/W}$
Operating junction temperature range	$T_J$			- 50 to +175					$^\circ\text{C}$
Storage temperature range	$T_{STG}$			- 50 to +175					$^\circ\text{C}$

Note 1: Pulse test with  $PW=300\mu\text{s}$ , 1% duty cycle

Note 2: Reverse Recovery Time Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$ 

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
AR25x (Note 1)	B0	G	AR	1,000 / Bulk packing

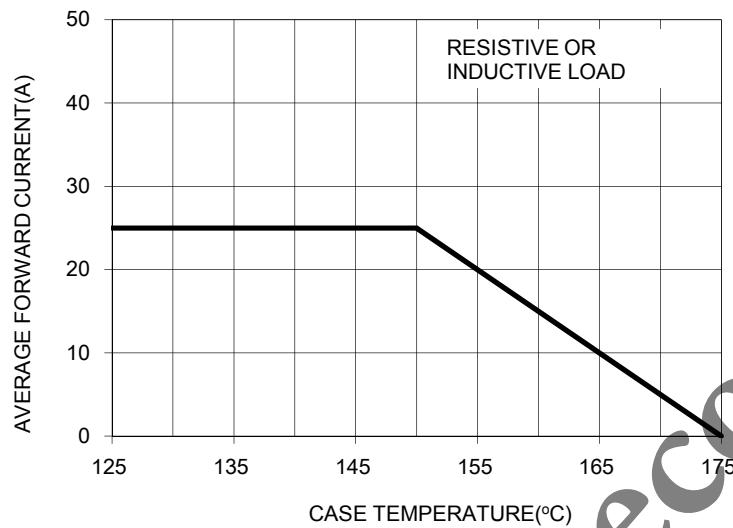
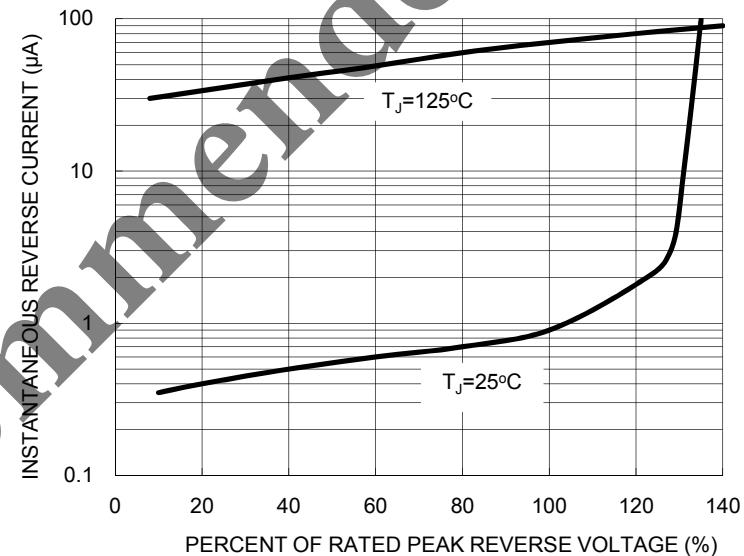
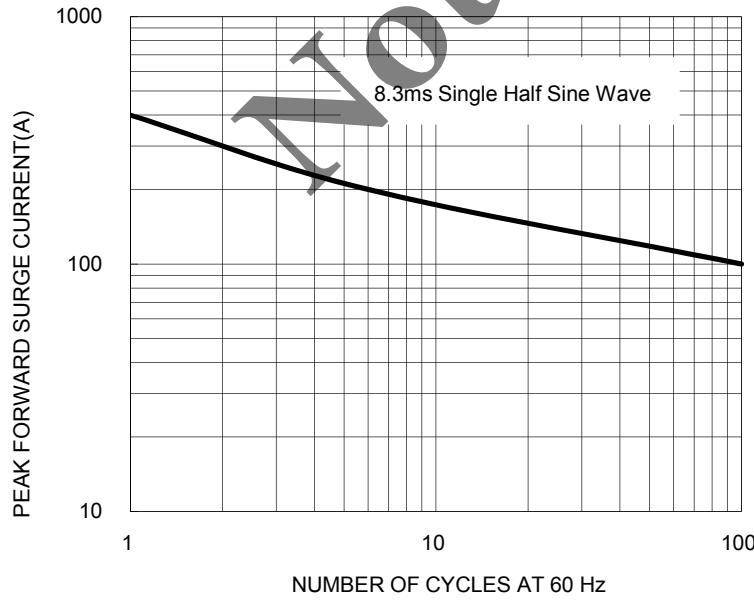
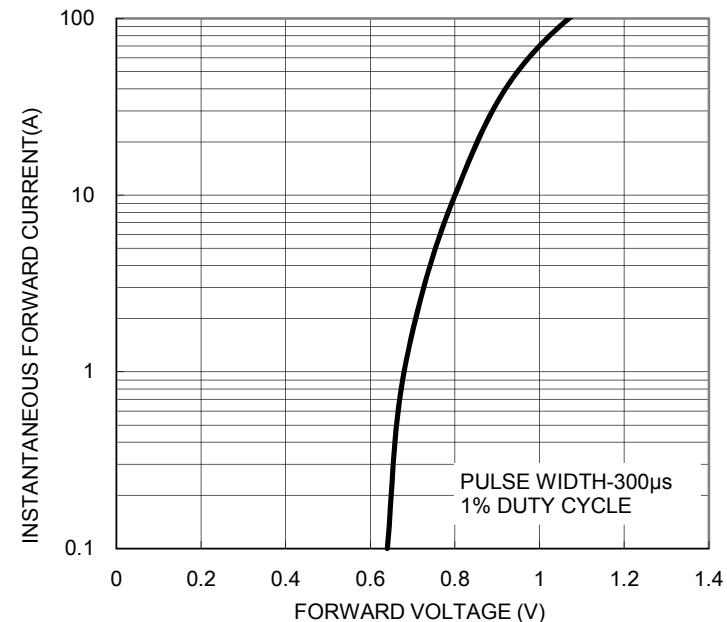
Note 1: "x" defines voltage from 50V (AR25A) to 1000V (AR25M)

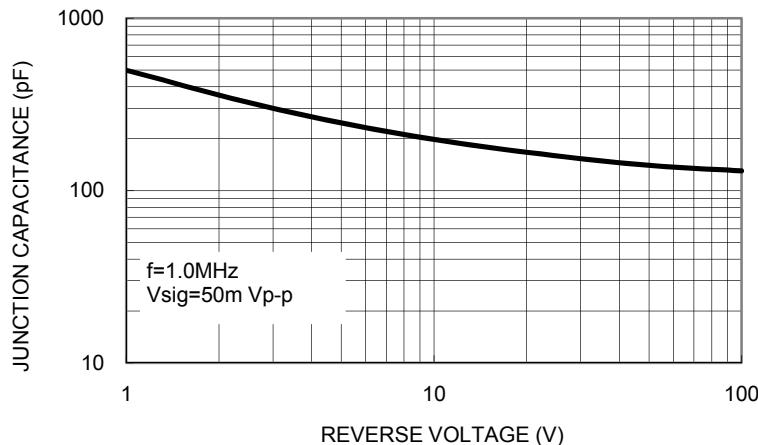
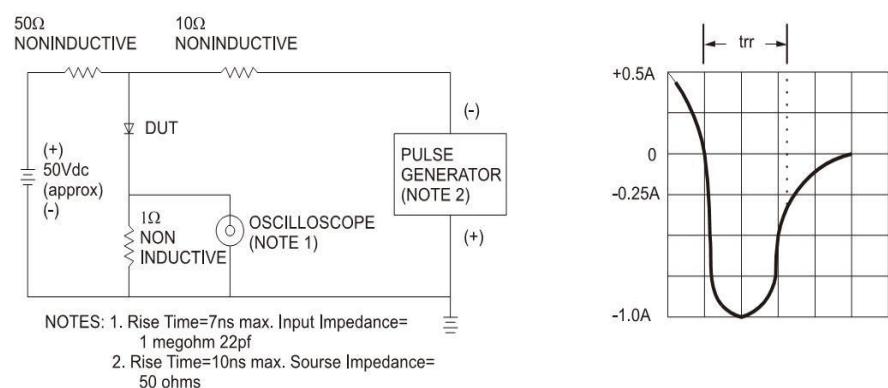
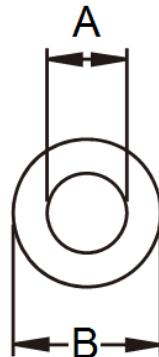
**EXAMPLE**

PREFERRED P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
AR25M B0	AR25M	B0		
AR25M B0G	AR25M	B0	G	Green compound

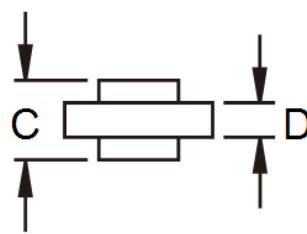
**RATINGS AND CHARACTERISTICS CURVES**

 (T<sub>A</sub>=25°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**
**AR**


DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	5.50	5.70	0.217	0.224
B	9.70	10.40	0.382	0.409
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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