

## 1A, 600V - 900V Glass Passivated High Efficient Rectifiers

### FEATURES

- Designed for use in switching power supplies, inverters and as free wheeling diodes
- High efficiency, low VF
- High reliability
- Ultrafast recovery time for high efficiency
- 175°C operating junction temperature
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21



### MECHANICAL DATA

**Case:** DO-204AL (DO-41)

Molding compound, UL flammability classification rating 94V-0

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

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

Meet JESD 201 class 2 whisker test

**Weight:** 0.33 g (approximately)

**DO-204AL (DO-41)**

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)				
PARAMETER	SYMBOL	MUR160A	MUR190A	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	600	900	V
Maximum RMS voltage	V <sub>RMS</sub>	420	630	V
Maximum DC blocking voltage	V <sub>DC</sub>	600	900	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1		A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	35		A
Maximum instantaneous forward voltage @ 1 A (Note 1)	V <sub>F</sub>	T <sub>J</sub> =25°C 1.25	1.70	V
		T <sub>J</sub> =125°C 1.05	1.50	
Maximum reverse current @ rated V <sub>R</sub>	I <sub>R</sub>	T <sub>J</sub> =25°C 5		μA
		T <sub>J</sub> =125°C 150		
Maximum reverse recovery time (Note 2)	t <sub>rr</sub>	50	75	ns
Typical junction capacitance (Note 3)	C <sub>J</sub>	27	15	pF
Typical thermal resistance	R <sub>θJA</sub>	50		°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +175		°C
Storage temperature range	T <sub>STG</sub>	- 55 to +175		°C

Note 1: Pulse Test with PW=300μs, 1% Duty Cycle

Note 2: Reverse Recovery 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.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
MUR1x0A (Note 1)	H	A0	G	DO-41	3,000 / Ammo box (52mm taping)
		R0		DO-41	5,000 / 13" Paper reel
		R1		DO-41	5,000 / 13" Paper reel (Reverse)
		B0		DO-41	1,000 / Bulk packing

Note 1: "x" defines voltage from 600V (MUR160A) to 900V (MUR190A)

\*: Optional available

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
MUR160AHA0G	MUR160A	H	A0	G	AEC-Q101 qualified Green compound

## RATINGS AND CHARACTERISTICS CURVES

(T<sub>A</sub>=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

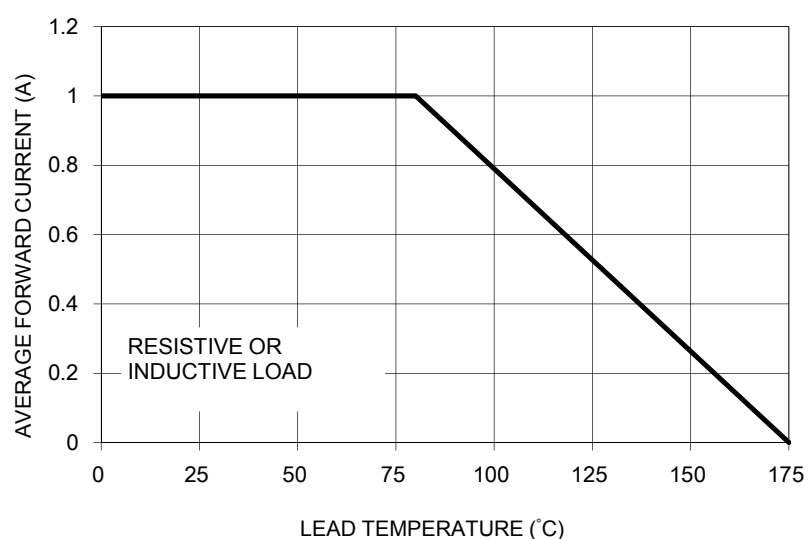


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

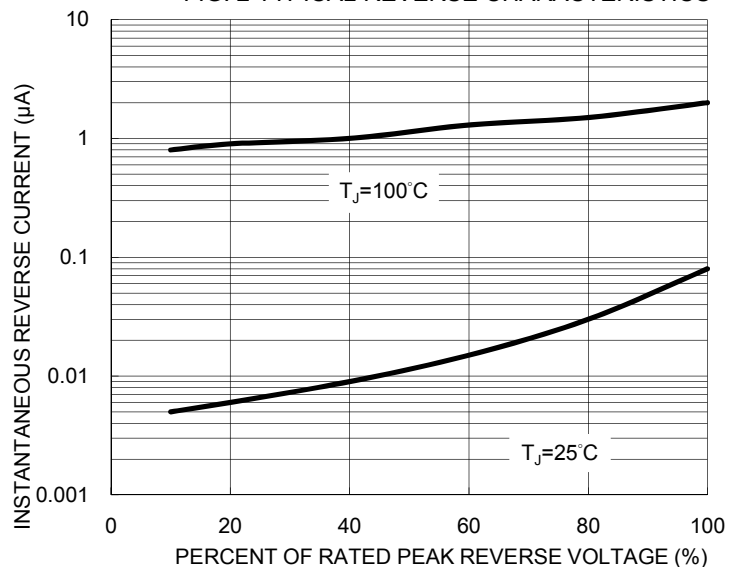


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

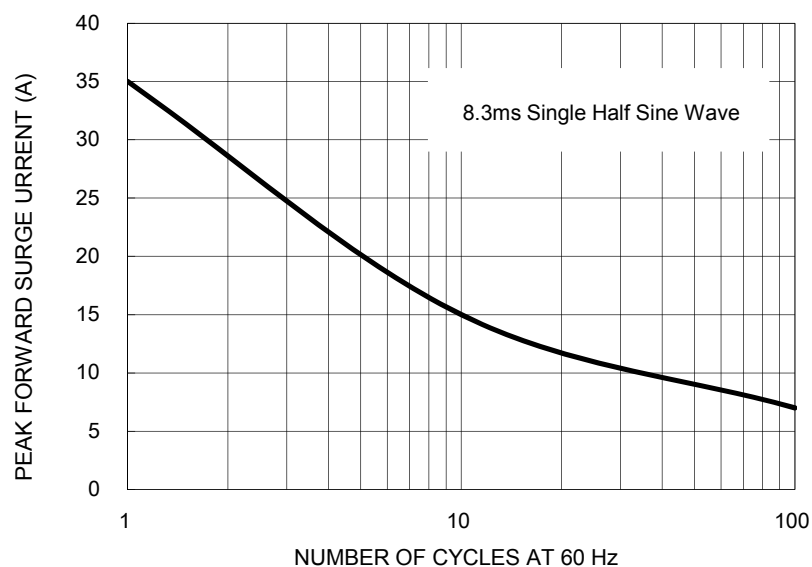
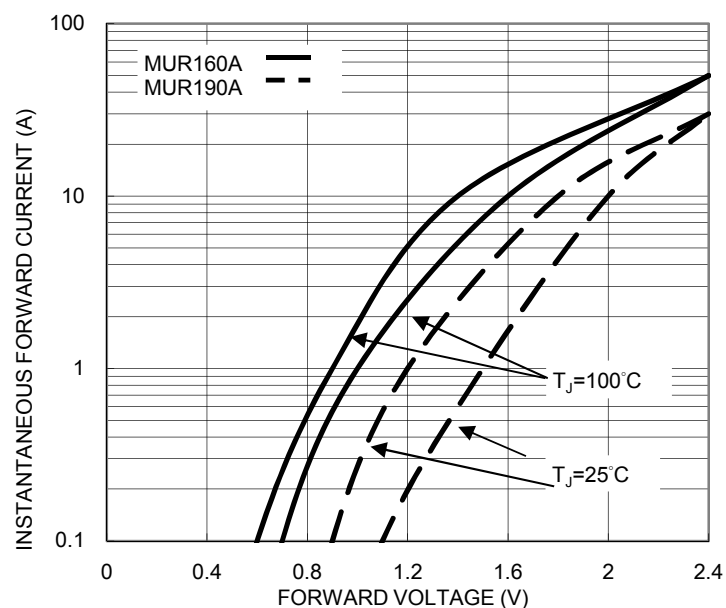


FIG. 4 TYPICAL FORWARD CHARACTERISTICS



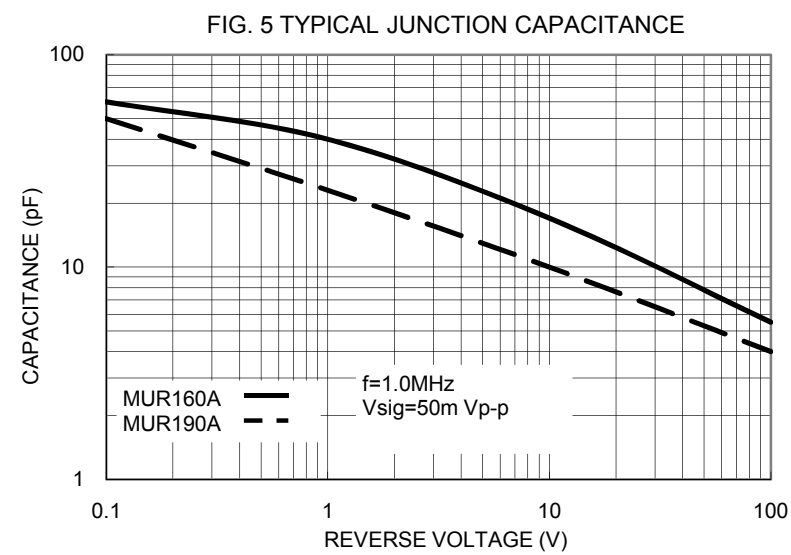
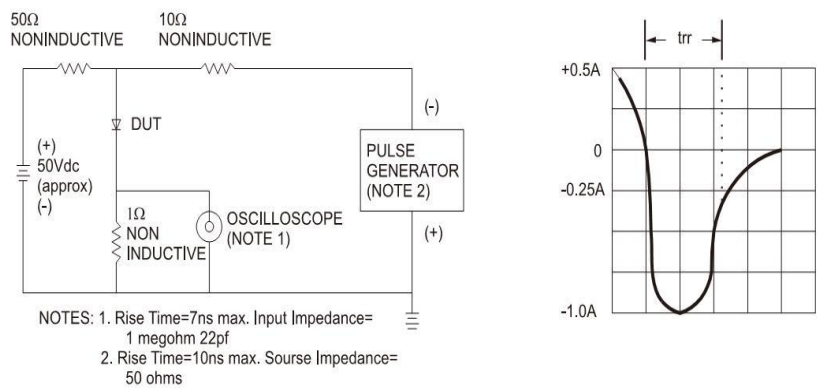
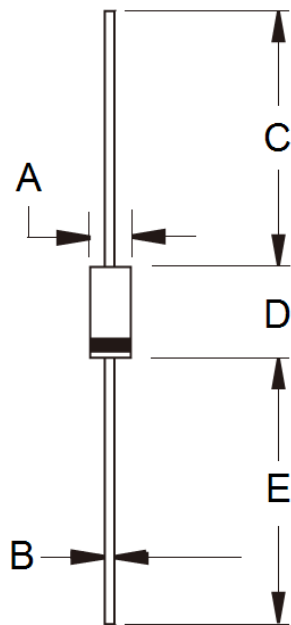


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

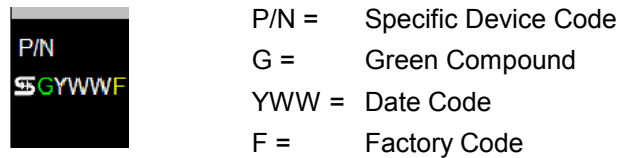


PACKAGE OUTLINE DIMENSIONS  
DO-204AL (DO-41)



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.00	2.70	0.079	0.106
B	0.71	0.86	0.028	0.034
C	25.40	-	1.000	-
D	4.20	5.20	0.165	0.205
E	25.40	-	1.000	-

MARKING DIAGRAM



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