

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)

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)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)				
PARAMETER	SYMBOL	MUR160A	MUR190A	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	600	900	V
Maximum RMS voltage	V_{RMS}	420	630	V
Maximum DC blocking voltage	V_{DC}	600	900	V
Maximum average forward rectified current	$I_{F(AV)}$	1		A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	35		A
Maximum instantaneous forward voltage $T_J=25^\circ\text{C}$ @ 1 A (Note 1)	V_F	1.25 1.05	1.70 1.50	V
Maximum reverse current @ rated V_R $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	5 150		μA
Maximum reverse recovery time (Note 2)	t_{rr}	50	75	ns
Typical junction capacitance (Note 3)	C_J	27	15	pF
Typical thermal resistance	$R_{\theta JA}$	50		$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	- 55 to +175		$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 to +175		$^\circ\text{C}$

Note 1: Pulse Test with $PW=300\mu\text{s}$, 1% Duty Cycle

Note 2: Reverse Recovery 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.	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

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

FIG.1 FORWARD CURRENT DERATING CURVE

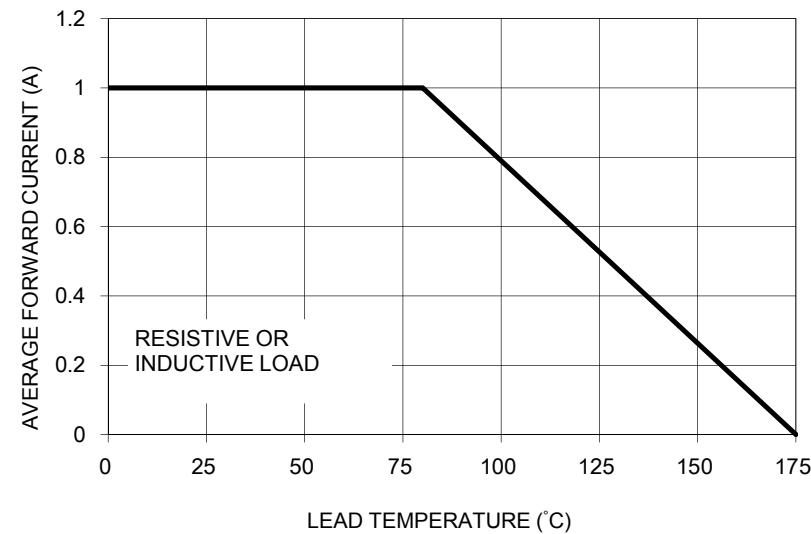


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

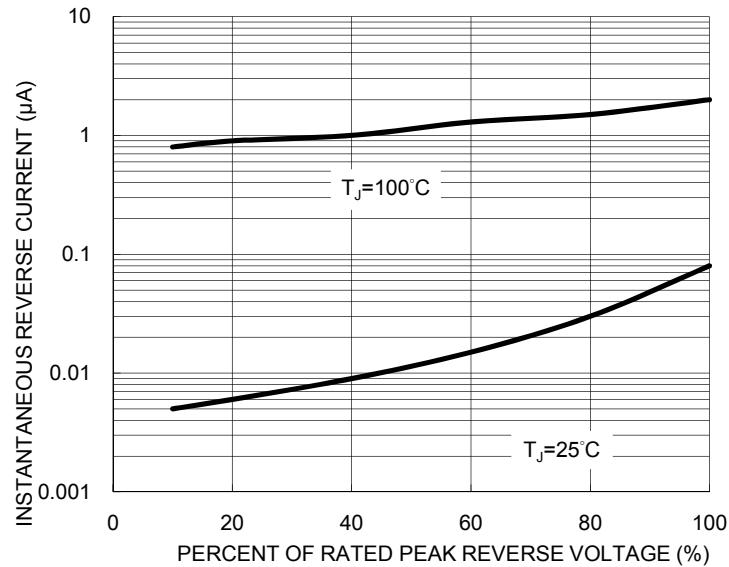


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

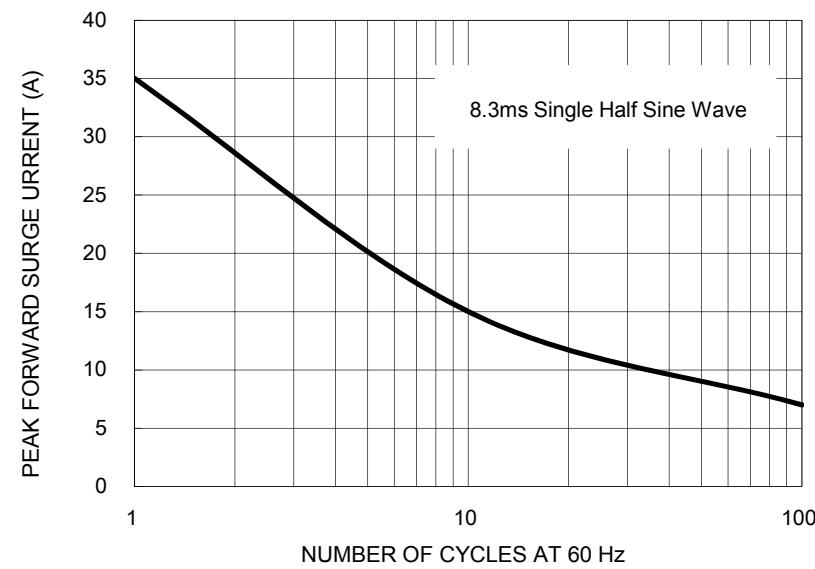
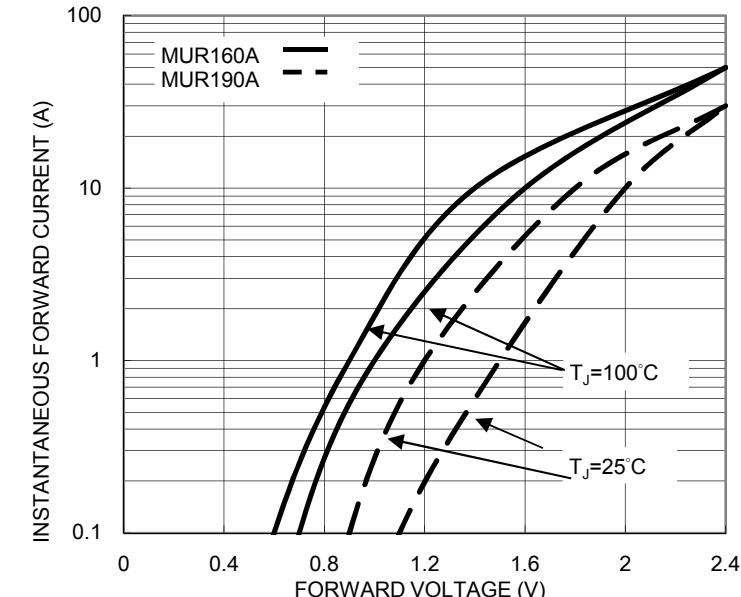
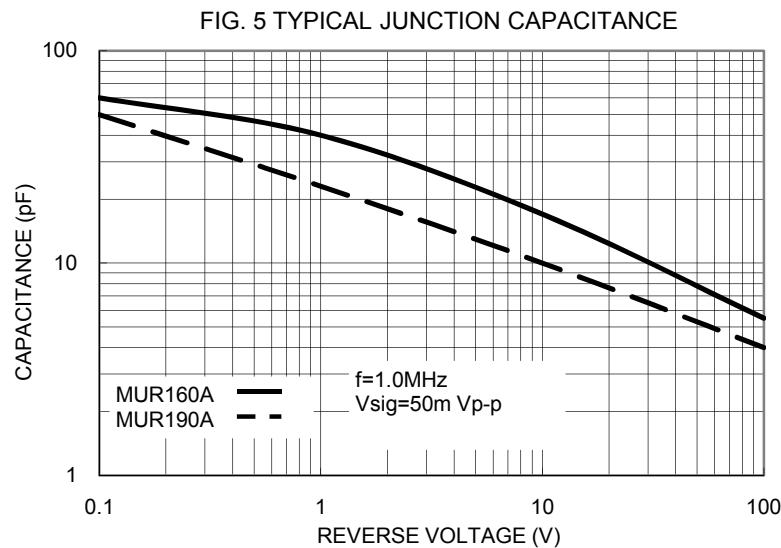
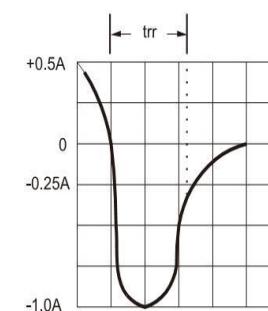
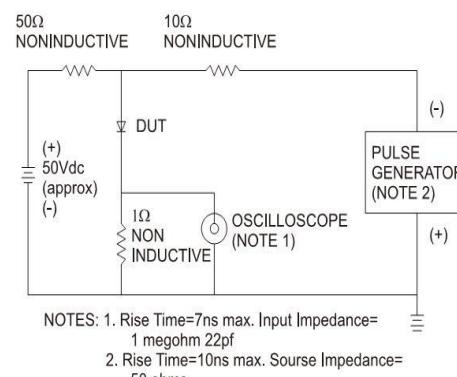
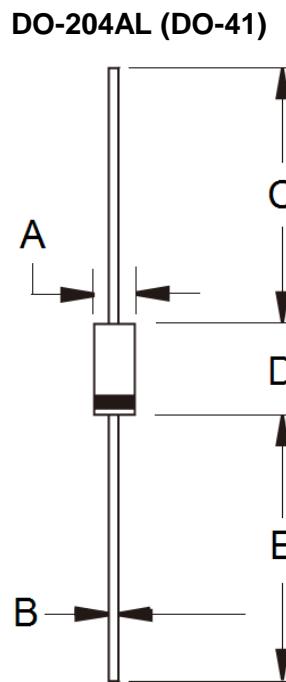


FIG. 4 TYPICAL FORWARD CHARACTERISTICS




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

PACKAGE OUTLINE DIMENSIONS


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


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

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