

## Glass Passivated High Efficient Rectifiers

### FEATURES

- Designed for use in switching power supplies, inverters and as free wheeling diodes
- High efficiency, Low VF
- 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 definition



**DO-204AC (DO-15)**

### MECHANICAL DATA

**Case:** DO-204AC (DO-15)

Molding compound, UL flammability classification rating 94V-0

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

Base P/N with prefix "H" on packing code - AEC-Q101 qualified

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

Meet JESD 201 class 1A whisker test

with prefix "H" on packing code meet JESD 201 class 2 whisker test

**Weight:** 0.4g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)				
PARAMETER	SYMBOL	MUR160	MUR190	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 (Note 1) @ 1 A      T <sub>J</sub> =150°C T <sub>J</sub> =25°C	V <sub>F</sub>	1.05 1.25	1.50 1.70	V
Maximum reverse current @ rated VR    T <sub>J</sub> =25 °C T <sub>J</sub> =125 °C	I <sub>R</sub>	5 150		μA
Maximum reverse recovery time (Note 2)	T <sub>rr</sub>	50	75	ns
Typical junction capacitance (Note 2)	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=300 μs, 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.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
MUR1x0 (Note 1)	Prefix "H"	A0	Suffix "G"	DO-15	1,500 / Ammo box
		R0		DO-15	3,500 / 13" Paper reel
		B0		DO-15	1,000 / Bulk packing

Note 1: "x" defines voltage from 600V (MUR160) to 900V (MUR190)

EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
MUR160 A0	MUR160		A0		
MUR160 A0G	MUR160		A0	G	Green compound
MUR160HA0	MUR160	H	A0		AEC-Q101 qualified

**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

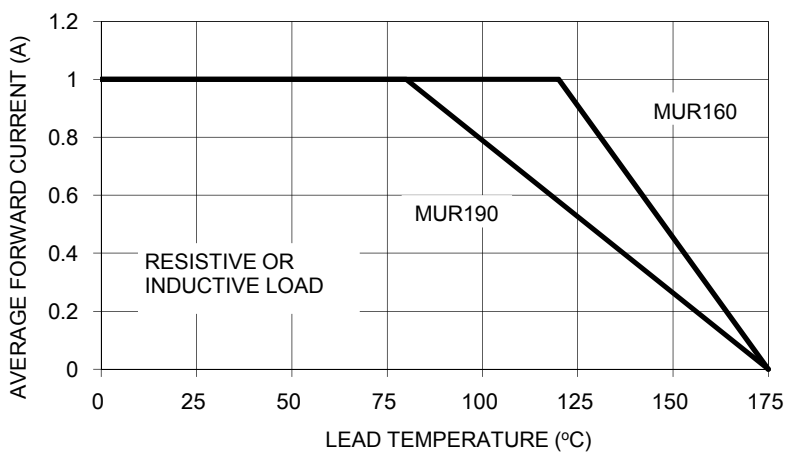


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

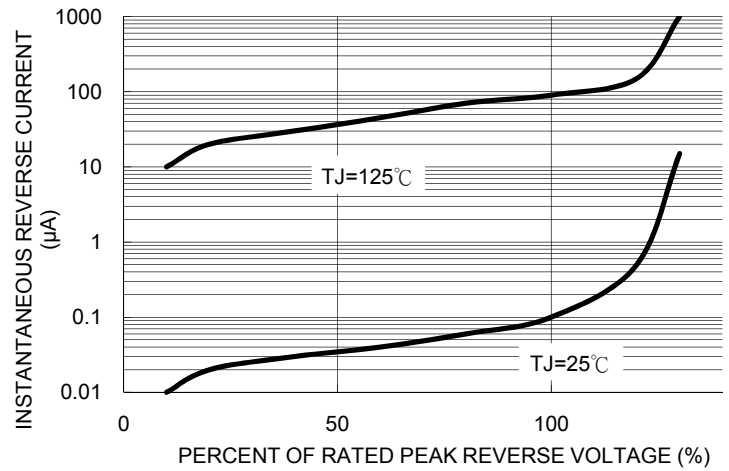


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

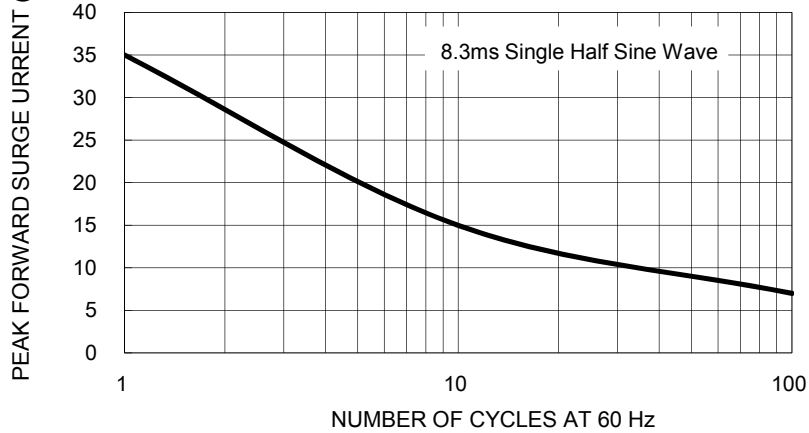


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

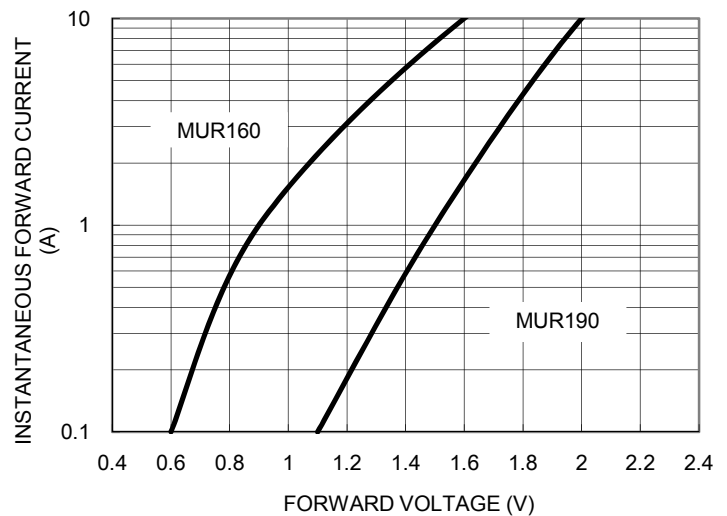


FIG. 5 TYPICAL JUNCTION CAPACITANCE

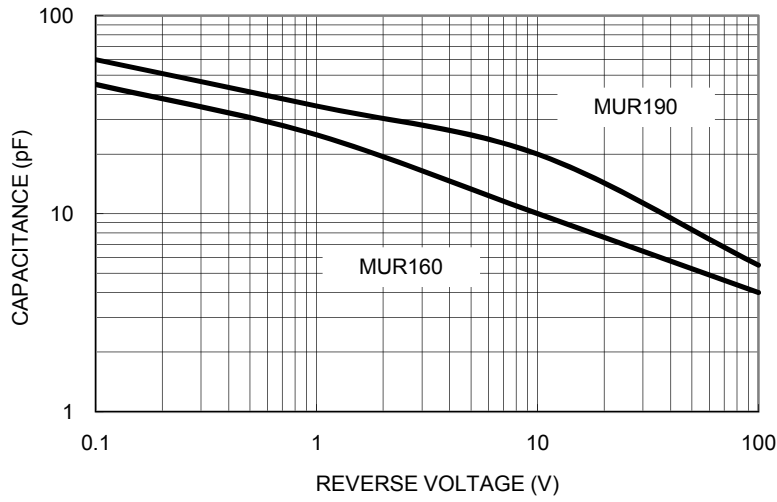
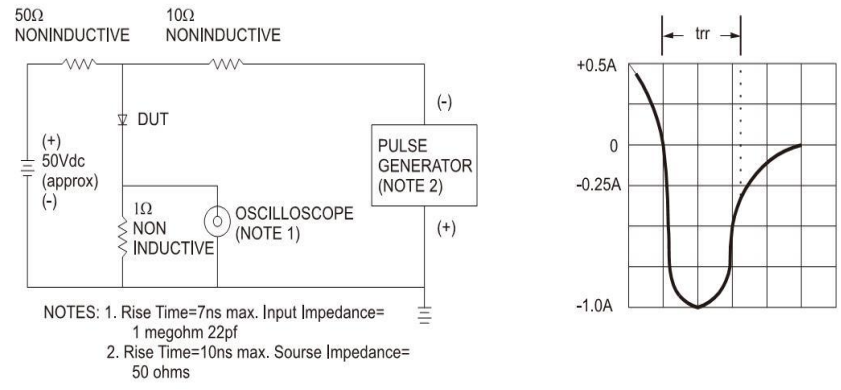
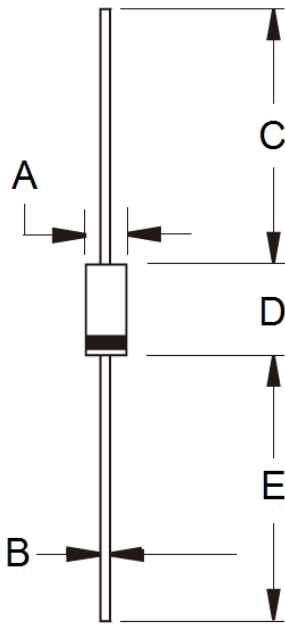


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.60	3.60	0.102	0.142
B	0.70	0.90	0.028	0.035
C	25.40	-	1.000	-
D	5.80	7.60	0.228	0.299
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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