

**ULTRAFAST RECTIFIER**

VOLTAGE RANGE 200 to 600 Volts CURRENT 1.0 Ampere

**FEATURES**

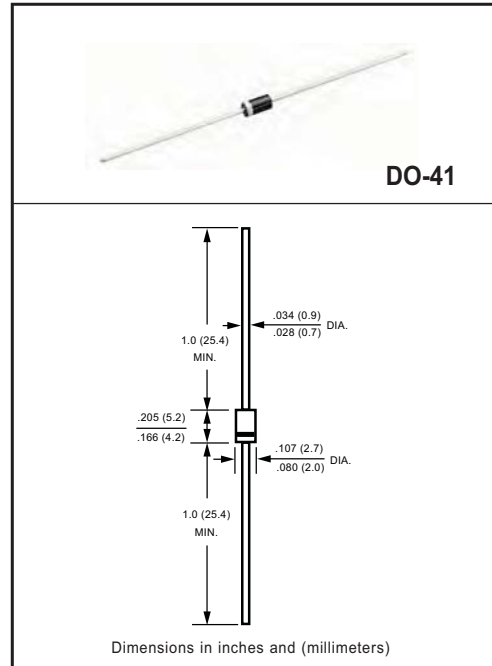
- \* High reliability
- \* Low leakage
- \* Low forward voltage
- \* High current capability
- \* Ultrafast switching speed
- \* High surge capability
- \* Good for switching mode circuit
- \* P/N suffix V means AEC-Q101 qualified, e.g:MUR160V
- \* P/N suffix V means Halogen-free

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.33 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

RATINGS	SYMBOL	MUR120	MUR140	MUR160	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	200	400	600	Volts
Maximum RMS Voltage	VRMS	140	280	420	Volts
Maximum DC Blocking Voltage	VDC	200	400	600	Volts
Maximum Average Forward Rectified Current at TA=55°C	Io	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	35			Amps
Current Squared Time	I <sup>2</sup> t	5.08			A <sup>2</sup> Sec
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150			°C

**ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)**

CHARACTERISTICS		SYMBOL	MUR120	MUR140	MUR160	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		V <sub>F</sub>	0.875	1.25		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C	I <sub>R</sub>	2.0	5.0		uAmps
	@T <sub>A</sub> = 150°C		50	150		
Maximum Reverse Recovery Time (Note 1)		trr	25	50		nSec

NOTES : 1. Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = -1.0A, I<sub>RR</sub> = -0.25A  
2. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

2018-07  
REV: B

# RATING AND CHARACTERISTICS CURVES ( MUR120 THRU MUR160 )

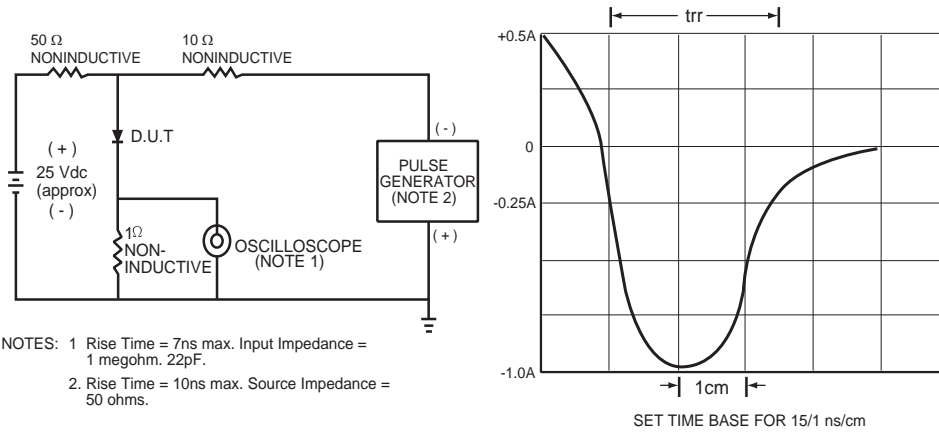


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

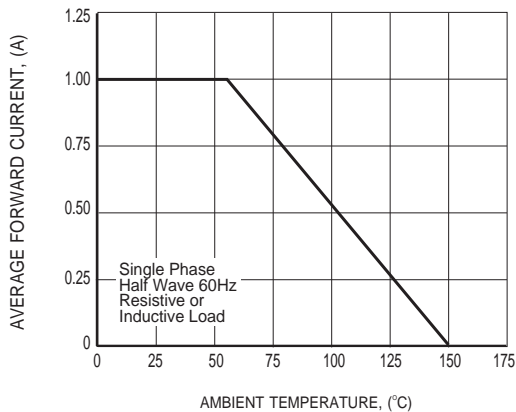


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

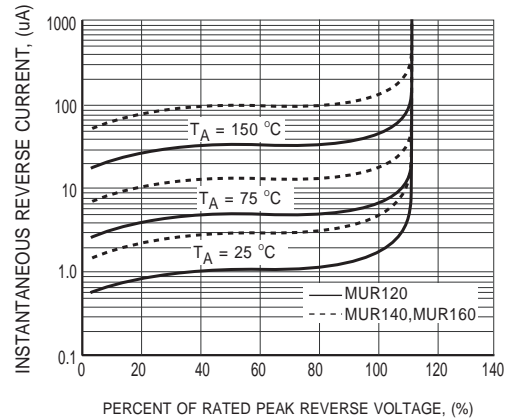


FIG.3 TYPICAL REVERSE CHARACTERISTICS

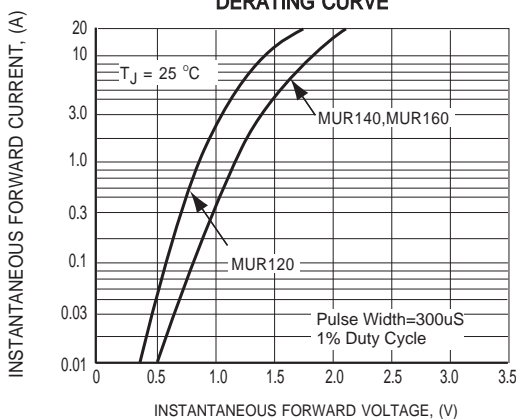


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

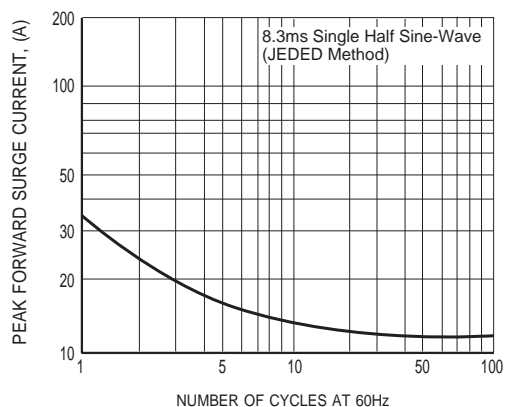
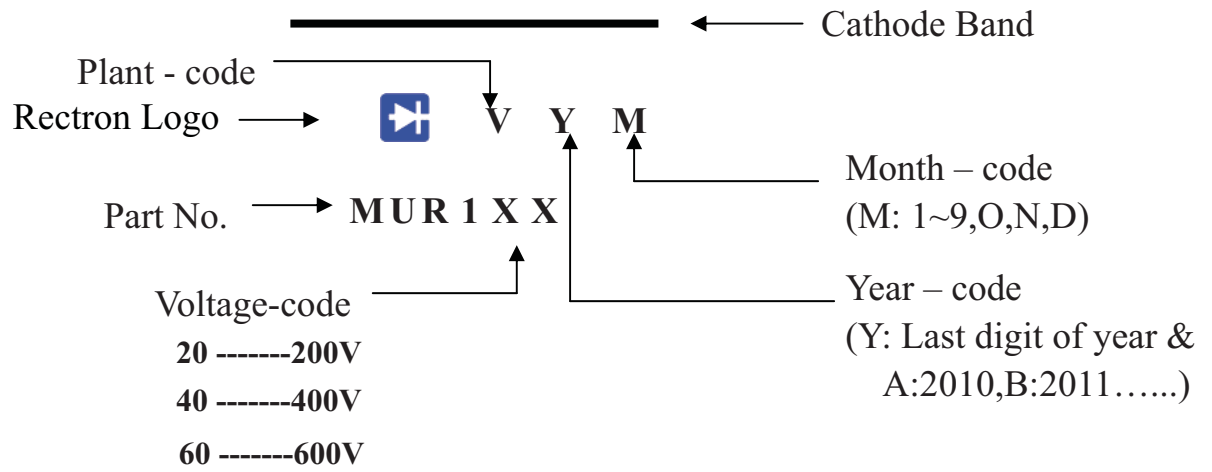


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Marking on the body



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### BULK PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DO-41	-B	1,000	194*75*21	415*220*255	50,000	16.2

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DO-41	-T	5,000	5,000	5.0	52	330	355*350*335	20,000	10.49

### AMMO PACK

PACKAGE	PACKING CODE	REEL ( EA )	COMPONENT SPACE(mm)	TAPE SPACE (mm)	BOX SIZE (mm)	CARTON SIZE(mm)	CARTON ( EA )	GROSS WEIGHT (Kg)
DO-41	-F	3,000	5.0	52	255*73*100	400*268*225	30,000	13.0
DO-41	-E	3,000	5.0	26	256*48*94	365*270*217	42,000	12.41

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