

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, eg:MURS160V
- * P/N suffix V means Halogen-free

MECHANICAL DATA

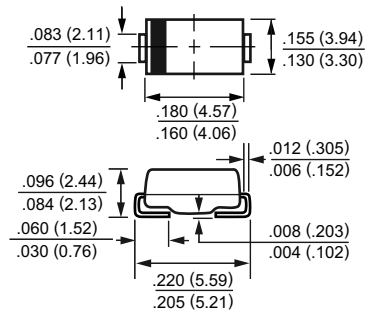
- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.057 gram

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%.



DO-214AA



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	MURS120	MURS140	MURS160	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	200	400	600	Volts
Maximum RMS Voltage	V _{RMS}	140	280	420	Volts
Maximum DC Blocking Voltage	V _{DC}	200	400	600	Volts
Maximum Average Forward Rectified Current at T _A =55°C	I _O	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	35			Amps
Current Squared Time	i ² t	5.08			A ² /Sec
Typical Thermal Resistance (Note 1)	R _{θJA}	23			°C/W
	R _{θJL}	13			°C/W
Typical Junction Capacitance (Note 2)	C _J	45			pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150			°C

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

CHARACTERISTICS	SYMBOL	MURS120	MURS140	MURS160	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V _F	0.875	1.25		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@T _A = 25°C	2.0		uAmps
		@T _A = 150°C	50		
Maximum Reverse Recovery Time (Note 3)	t _{rr}	25	50		nSec

- NOTES : 1. Thermal Resistance : Mounted on PCB.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A

RATING AND CHARACTERISTICS CURVES (MURS120 THRU MURS160)

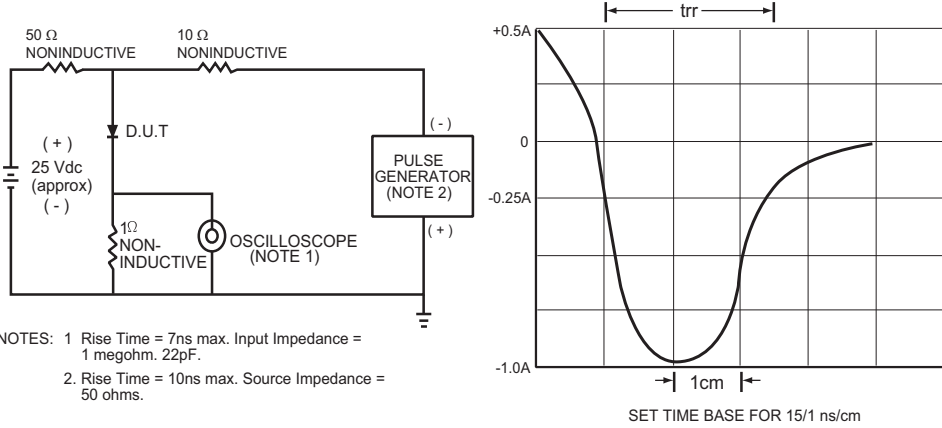


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

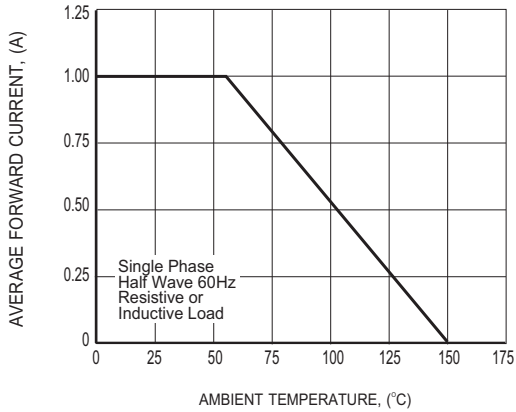


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

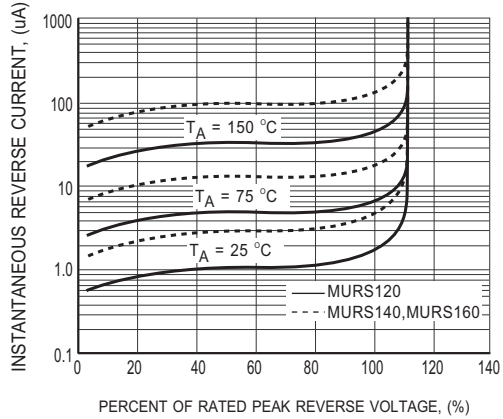


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

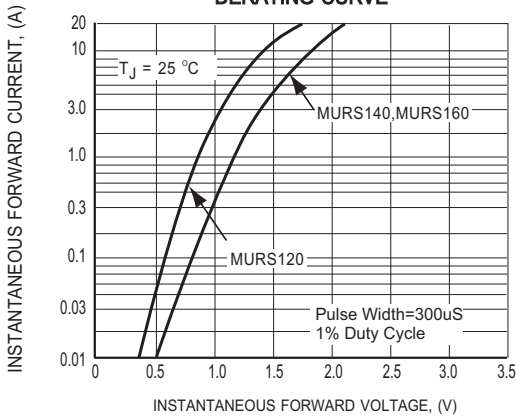


FIG.4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

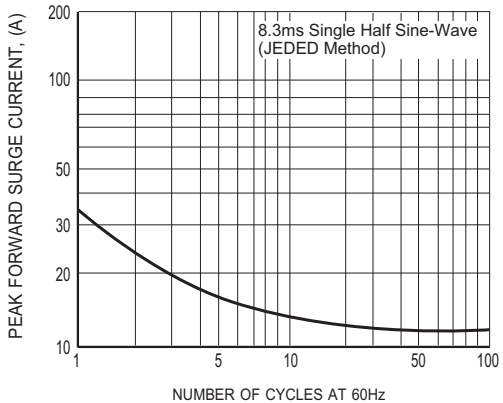
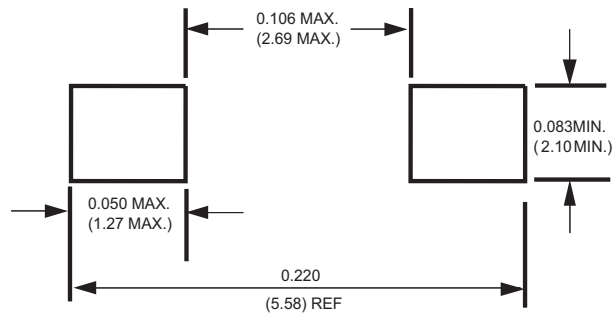


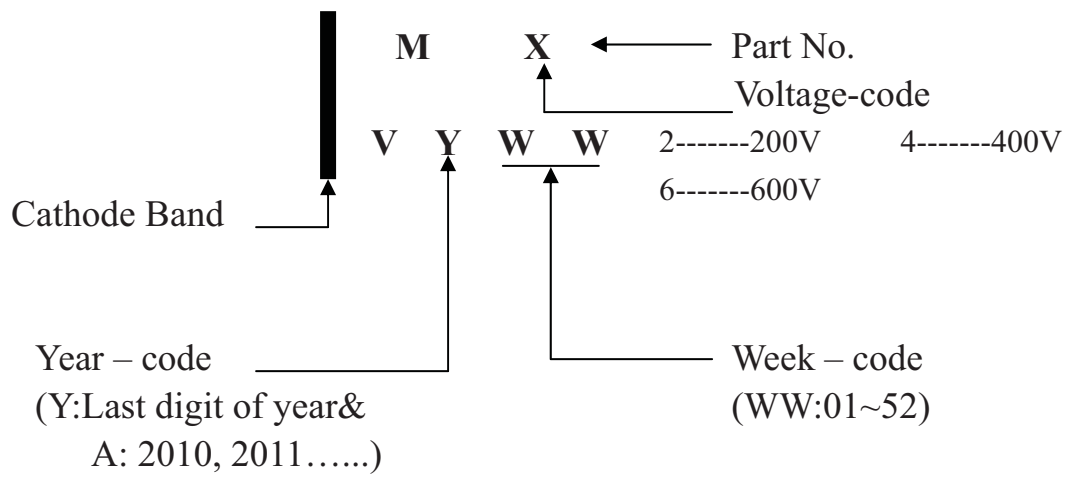
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Mounting Pad Layout



Dimensions in inches and (millimeters)

Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

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)
SMB	-W/-T	3,000	6,000	---	---	330	360*355*360	48,000	13.90

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