RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

MURS120A
MURS140A
MURS160A

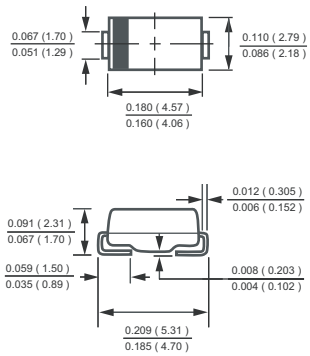
ULTRAFAST RECTIFIER

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

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

SMA



Dimensions in inches and (millimeters)

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 (@ T_A=25 °C unless otherwise noted)

RATINGS	SYMBOL	MURS120A	MURS140A	MURS160A	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 Squarad Time	I^2t	5.08			A^2Sec
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	23			°C/W
	$R_{\theta JL}$	13			°C/W
Typical Junction Capacitance (Note 2)	C_J	17			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	MURS120A	MURS140A	MURS160A	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	@T_A = 25°C	I_R	2.0	5.0		uAmps
	@T_A = 150°C		50	150		
Maximum Reverse Recovery Time (Note 3)		trr	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

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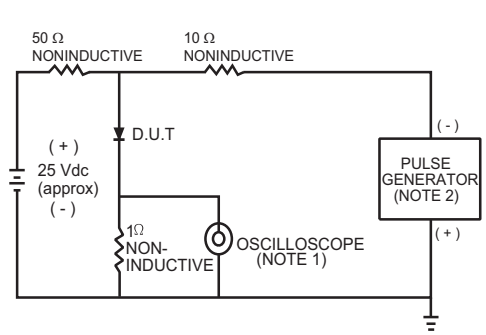
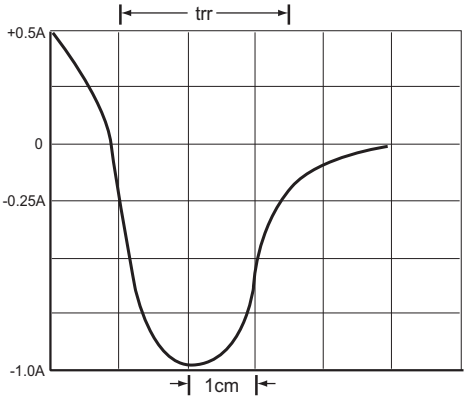
RATING AND CHARACTERISTICS CURVES (MURS120A THRU MURS160A)



NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.

2. Rise Time = 10ns max. Source Impedance = 50 ohms.



SET TIME BASE FOR 15/1 ns/cm

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

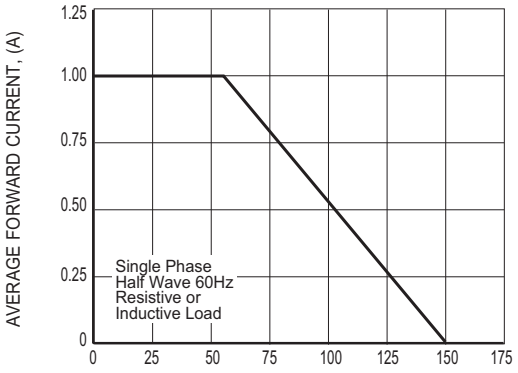


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

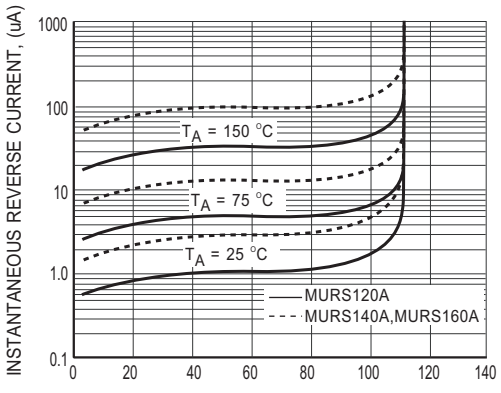


FIG.3 TYPICAL REVERSE CHARACTERISTICS

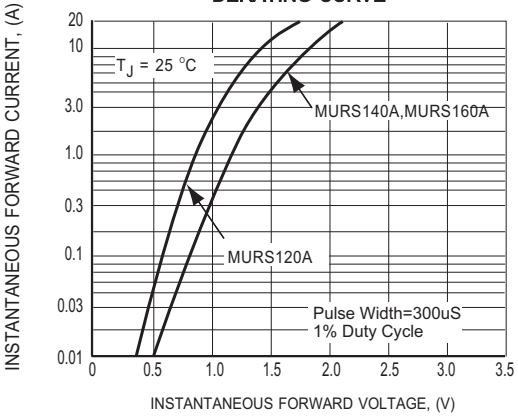


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

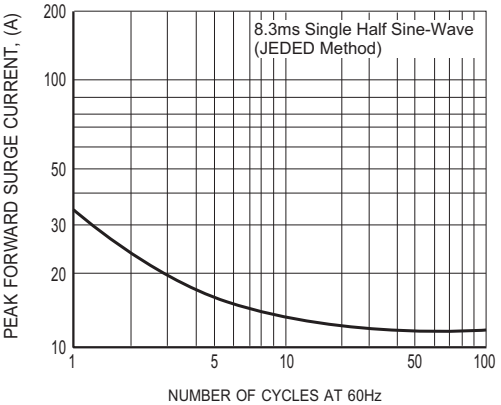
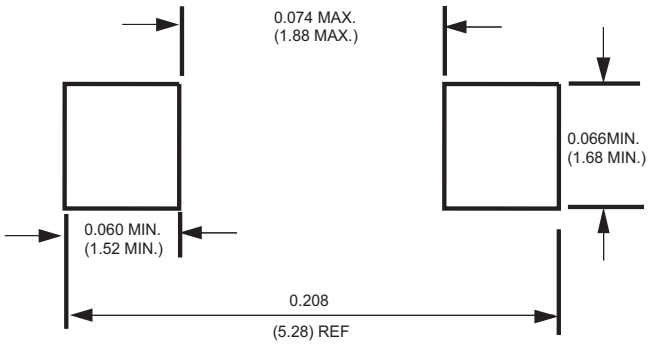


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Mounting Pad Layout



Dimensions in inches and (millimeters)

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)
SMA	-W	7,500	15,000	---	---	330	360*355*360	120,000	15.2

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)
SMA	-T	2,000	8,000	---	---	178	390*205*310	64,000	7.8

Marking Description