

Super Fast Rectifier



Features:

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Easily Cleaned With Alcohol, Isopropanol And Similar Solvents

Mechanical Data:

- Case : JEDEC DO-41, molded plastic
- Terminals : Axial lead, solderable per MIL-STD-202, Method 208
- Polarity : Colour band denotes cathode
- Weight : 0.012oz, 0.34g
- Mounting position : Any

Maximum Ratings and Electrical Characteristics:

Ratings at 25°C ambient temperature unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate by 20%.

Characteristics	Symbol	MUR160-T	Units
Maximum recurrent peak reverse voltage	V_{RRM}	600	V
Maximum RMS voltage	V_{RMS}	420	V
Maximum DC blocking voltage	V_{DC}	600	V
Maximum average forward rectified current 9.5mm lead length at $T_A = 75$	$I_{F(AV)}$	1	A
Peak forward surge current 8.3ms single half-sine-wave super imposed on rated load at $T_J = 125^\circ\text{C}$	I_{FSM}	35	A
Maximum instantaneous forward voltage at 1A	V_F	1.25	V
Maximum reverse current at $T_A = 25^\circ\text{C}$ at rated DC blocking voltage at $T_A = 100^\circ\text{C}$	I_R	5 150	A
Maximum reverse recovery time (Note1)	t_{rr}	50	ns
Typical junction capacitance (Note2)	C_J	22	pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	50	$^\circ\text{C/W}$
Operating and Storage temperature range	T_J, T_{STG}	- 55 to +150	$^\circ\text{C}$

Note:

- (1) Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.
- (2) Measured at 1MHz and applied reverse voltage of 4.1V_{DC}
- (3) Thermal resistance from junction to ambient

FIG.1 – TYPICAL FORWARD CHARACTERISTICS

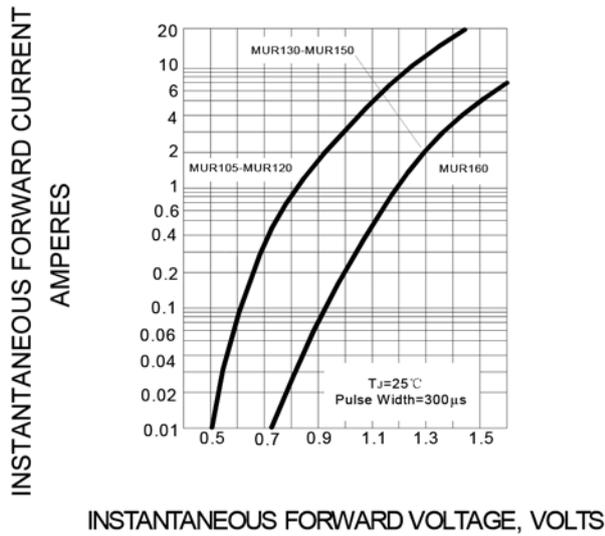


FIG.2 – FORWARD DRATING CURVE

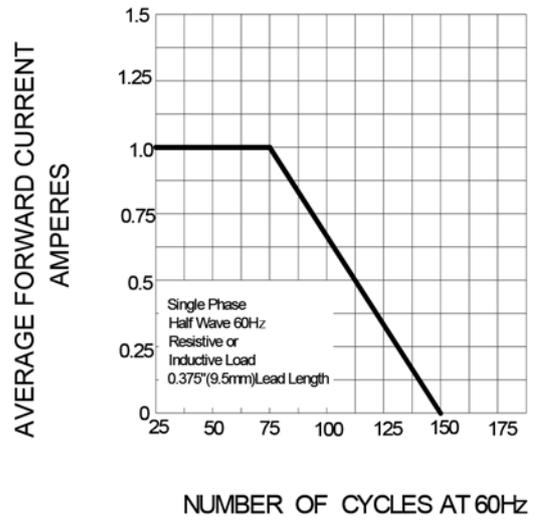
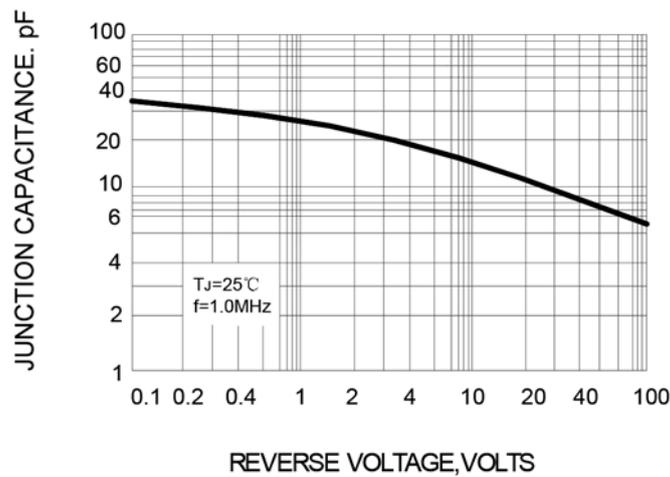


FIG.3 – TYPICAL JUNCTION CAPACITANCE

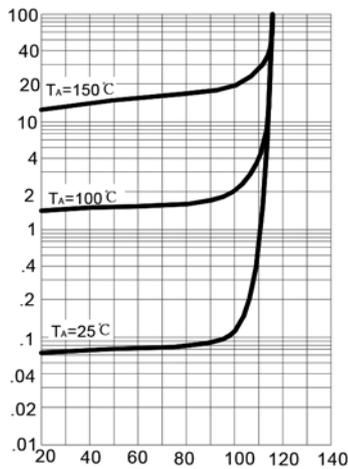


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INSTANTANEOUS REVERSE LEAKAGE CURRENT
MICRO AMPERES

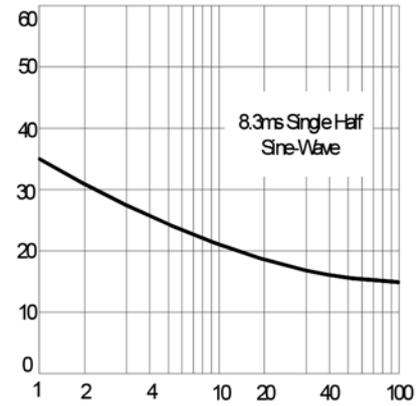
FIG.4 – TYPICAL REVERSE CHARACTERISTICS



PERCENT OF RATED PEAK REVERSE VOLTAGE, %

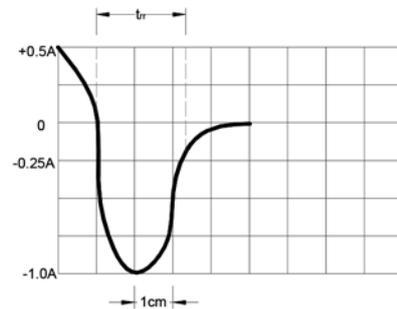
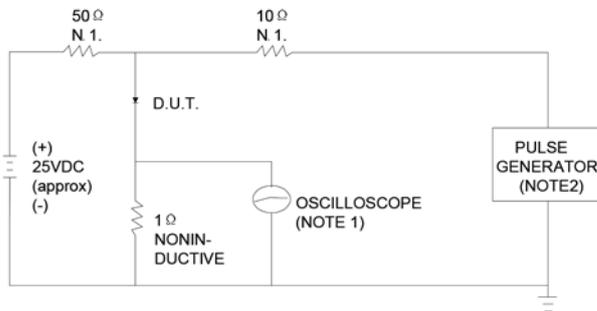
FIG.5 – PEAK FORWARD SURGE CURRENT

PEAK FORWARD SURGE CURRENT
AMPERES



NUMBER OF CYCLES AT 60Hz

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



NOTES: 1. RISE TIME = 7ns MAX INPUT IMPEDANCE = 1MΩ . 22pF.
2. RISE TIME = 10ns MAX SOURCE IMPEDANCE = 50 Ω.

SET TIME BASE FOR 10/20 ns/cm

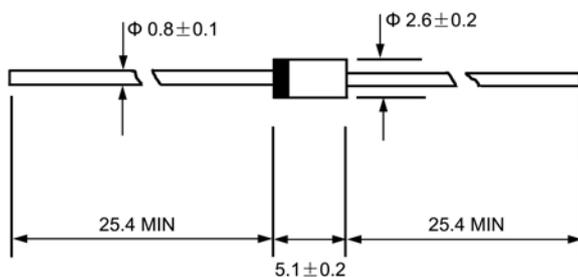


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Dimensions:

DO - 41



Dimensions : Millimetres

Part Number Table

Description	Part Number
Super Fast Rectifier	MUR160-T

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