

MUR105-MUR160

Super Fast Rectifiers

VOLTAGE RANGE: 50 --- 600 V

CURRENT: 1.0 A



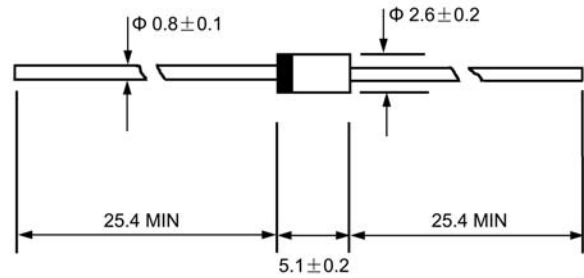
DO - 41

Features

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

Mechanical Data

- ◇ Case: JEDEC DO--41, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting position: Any



Dimensions in 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 by 20%.

		MUR 105	MUR 110	MUR 115	MUR 120	MUR 130	MUR 140	MUR 150	MUR 160	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0								A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	35.0								A
Maximum instantaneous forward voltage @ 1.0A	V_F	0.875				1.25				V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	2.0				5.0				μA
		50				150				
Maximum reverse recovery time (Note1)	t_{rr}	25				50				ns
Typical junction capacitance (Note2)	C_J	22								pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	50								$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 ----- + 150								$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ----- + 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 1.0MHz and applied reverse voltage of 4.1V DC.

3. Thermal resistance from junction to ambient.

Ratings AND Characteristic Curves

FIG.1 – TYPICAL FORWARD CHARACTERISTICS

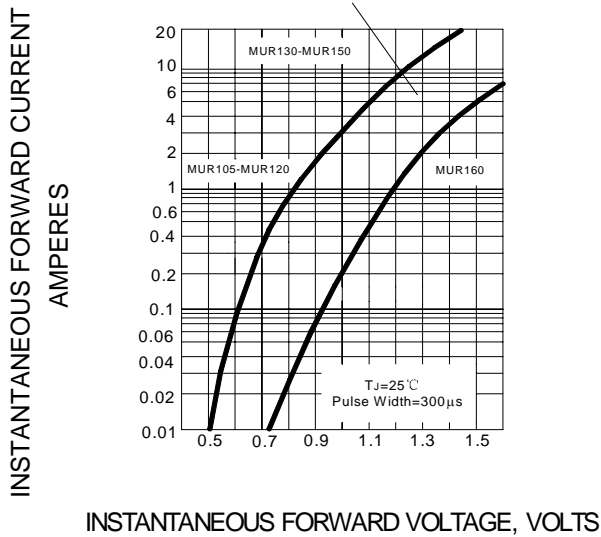


FIG.2 – FORWARD DRATING CURVE

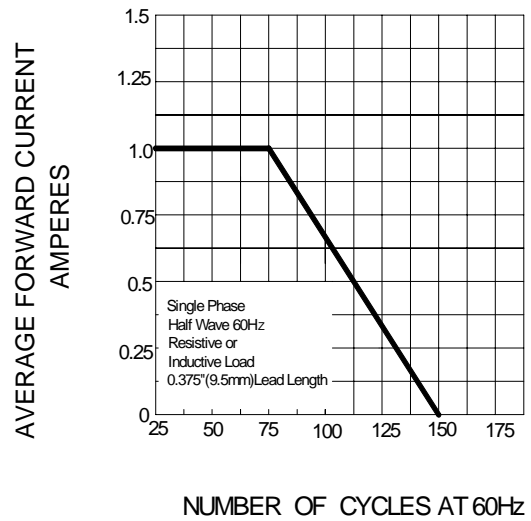
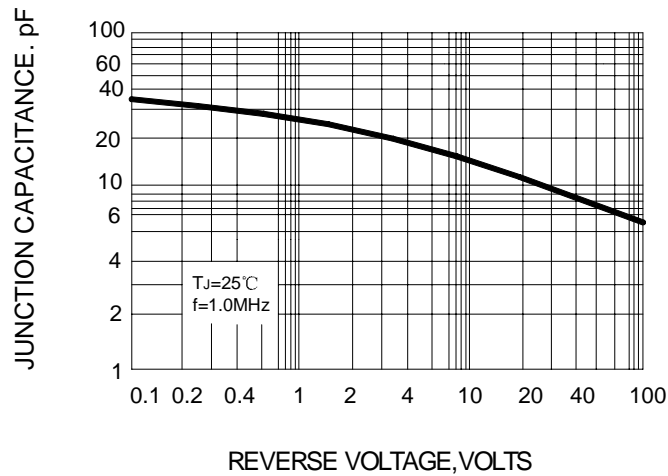


FIG.3 – TYPICAL JUNCTION CAPACITANCE



Ratings AND Characteristic Curves

FIG.4 – TYPICAL REVERSE CHARACTERISTICS

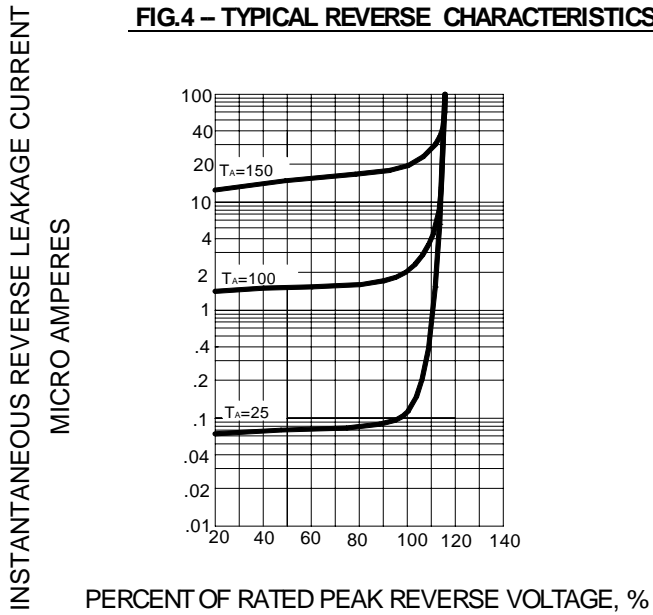


FIG.5 – PEAK FORWARD SURGE CURRENT

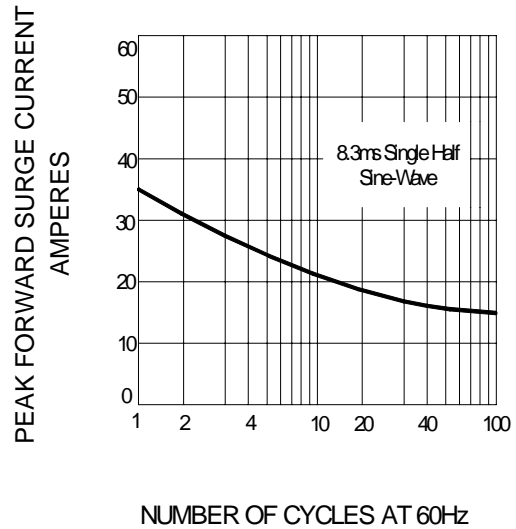
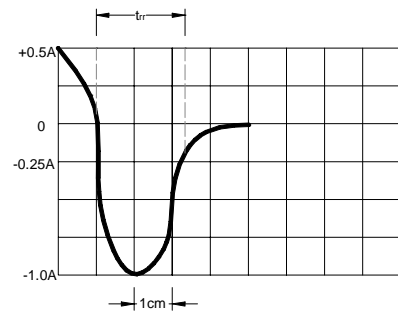
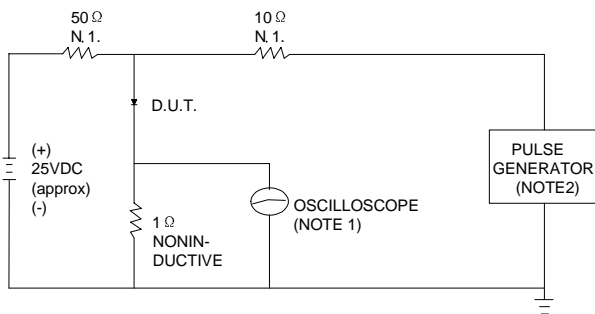


FIG.6 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

SET TIME BASE FOR 10/20 ns/cm