

MUR120-MUR190

Super Fast Rectifiers

VOLTAGE RANGE: 200 --- 900 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

φ 0.8±0.1 φ 2.6±0.2 25.4 MIN 25.4 MIN 5.1±0.2

Dimensions in millimeters

Mechanical Data

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

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 120	MUR 130	MUR 140	MUR 150	MUR 160	MUR 170	MUR 180	MUR 190	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	200	300	400	500	600	700	800	900	V
Maximum RMS voltage	V_{RMS}	140	210	280	350	420	490	560	630	V
Maximum DC blocking voltage	V_{DC}	200	300	400	500	600	700	800	900	V
Maximum average forw ard rectified current 9.5mm lead length, @T _A =75℃	I _{F(AV)}	1.0							А	
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load @T _J =125°C	I _{FSM}	35.0							Α	
Maximum instantaneous forward voltage @ 1.0A	V _F	0.875 1.25 1.7				7	V			
Maximum reverse current $@T_A = 25^{\circ}C$ at rated DC blocking voltage $@T_A = 100^{\circ}C$	I _R	2.0 5.0 50 150).0 00	μА	
Maximum reverse recovery time (Note1)	t _{rr}	25 50					75		ns	
Typical junction capacitance (Note2)	CJ	22 15						pF		
Typical thermal resistance (Note3)	$R_{\theta JA}$	50 60							.C\M	
Operating junction temperature range	TJ	- 55 + 150						$^{\circ}\!\mathbb{C}$		
Storage temperature range	T _{STG}	- 55 + 150								$^{\circ}\!\mathbb{C}$

NOTE: 1. Measured with I_F =0.5A, I_R =1A, I_{rr} =0.25A.

- 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- 3. Thermal resistance from junction to ambient.



MUR120-MUR190

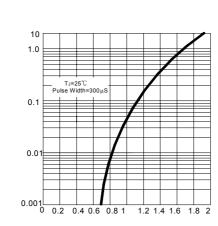
Super Fast Rectifiers

Ratings AND Charactieristic Curves

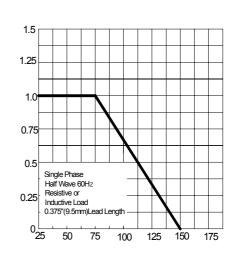
FIG.1 - TYPICAL FORWARD CHARACTERISTICS

FIG.2 -- FORWARD DRATING CURVE





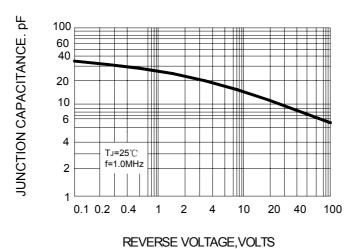
AVERAGE FORWARD CURRENT AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

NUMBER OF CYCLES AT 60Hz

FIG.3 - TYPICAL JUNCTION CAPACITANCE





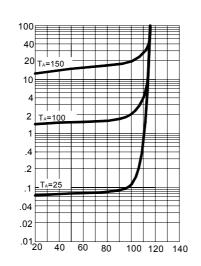
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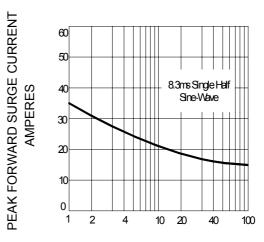
INSTANTANEOUS REVERSE LEAKAGE CURRENT MICRO AMPERES

FIG.4 - TYPICAL REVERSE CHARACTERISTICS



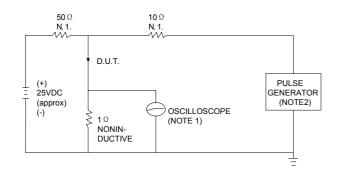
PERCENT OF RATED PEAK REVERSE VOLTAGE, %

FIG.5 - PEAK FORWARD SURGE CURRENT

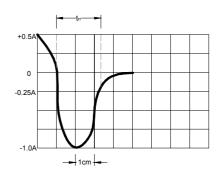


NUMBER OF CYCLES AT 60Hz

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



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



SET TIME BASE FOR 10/20 ns/cm