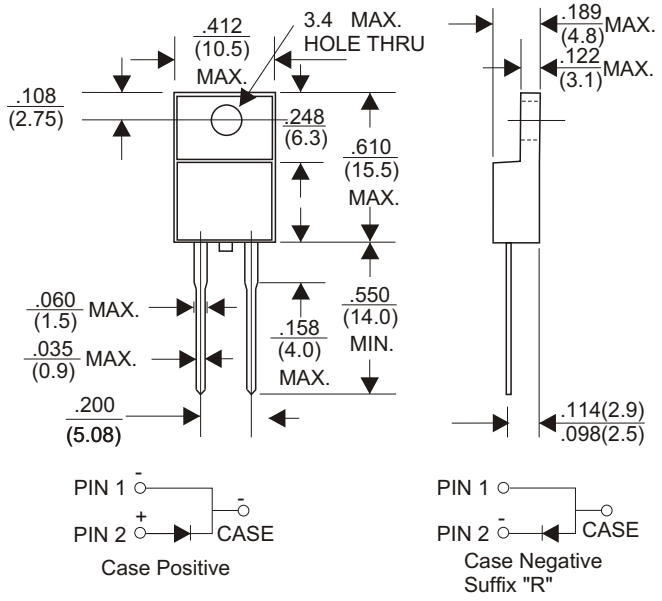
SUPER FAST RECTIFIERS

MURF3005
- MURF30100

ITO-220AC (FULLYINSULATED)



Dimensions in inches and (millimeters)

FEATURES

* Low forward voltage drop
* High current capability
* High reliability
* High surge current capability
* Good for switching mode application

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Lead solderable per MIL-STD-202, method 208 guranteed
* Polarity: As Marked
* Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

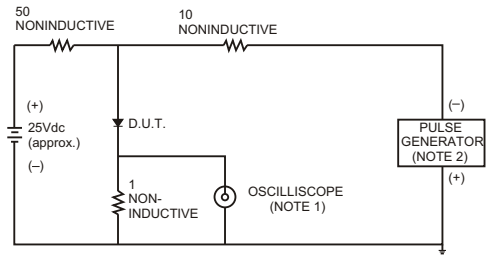
Rating 25 C ambient temperature uniess otherwies specified.Single phase half wave, 60Hz, resistive or inductive load.For capacitive load, derate current by 20%.

TYPE NUMBER	MURF3005	MURF3010	MURF3020	MURF3030	MURF3040	MURF3060	MURF3080	MURF30100	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=50°C	30.0								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	250								A
Maximum Instantaneous Forward Voltage at 30.0A	1.0			1.3		1.75			V
Maximum DC Reverse Current Ta=25°C	10								μA
at Rated DC Blocking Voltage Ta=100°C	400								μA
Maximum Reverse Recovery Time (Note 1)	50								nS
Typical Junction Capacitance (Note 2)	130								pF
Operating and Storage Temperature Range T_J, T_{STG}	-65 — +150								°C

NOTES: 1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

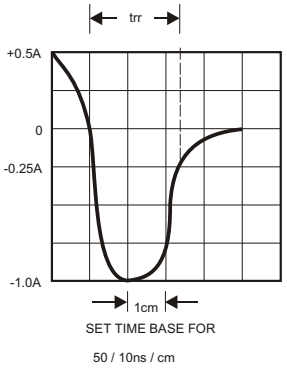
RATING AND CHARACTERISTIC CURVES (MURF3005 THRU MURF30100)

FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

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



SET TIME BASE FOR
50 / 10ns / cm

FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

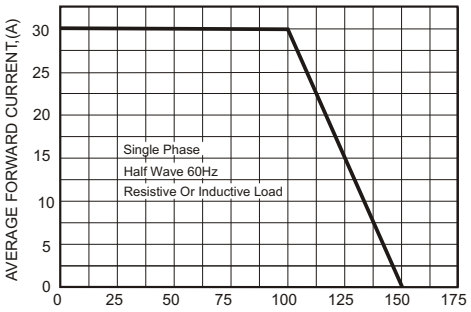


FIG.3-TYPICAL FORWARD CHARACTERISTICS

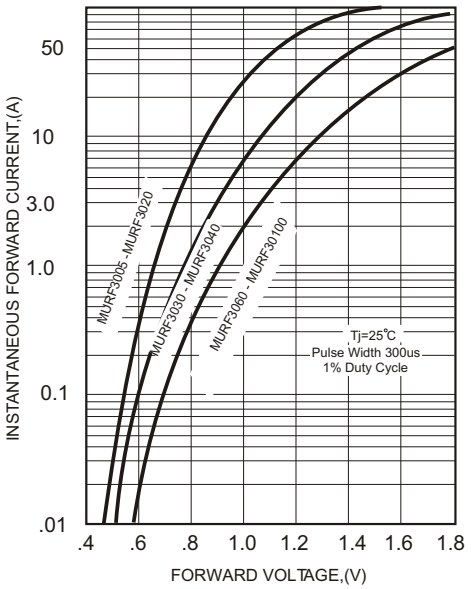


FIG.4-TYPICAL REVERSE CHARACTERISTICS

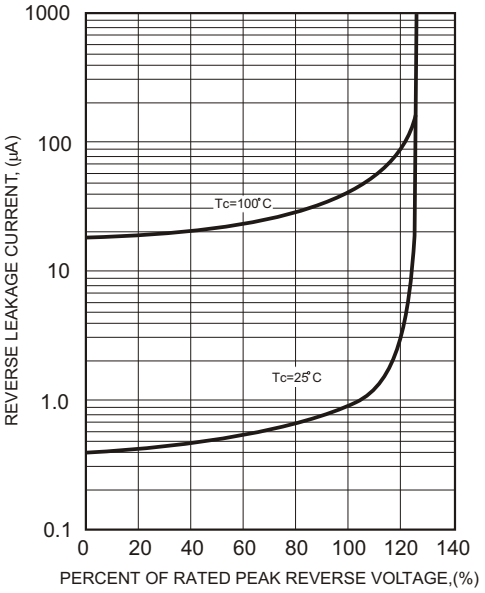


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

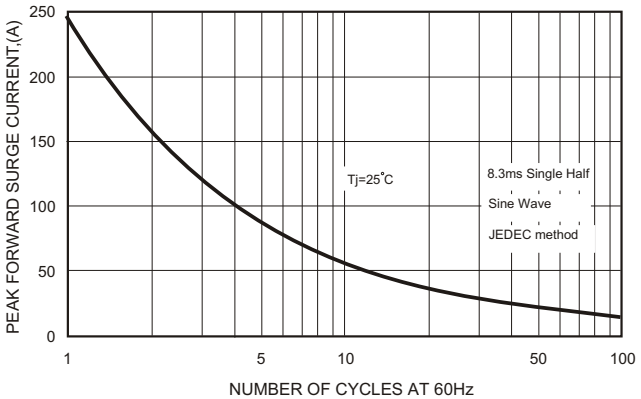


FIG.6-TYPICAL JUNCTION CAPACITANCE