



# MURF2005 THRU MURF2060

## SUPER FAST RECOVERY SILICON RECTIFIER

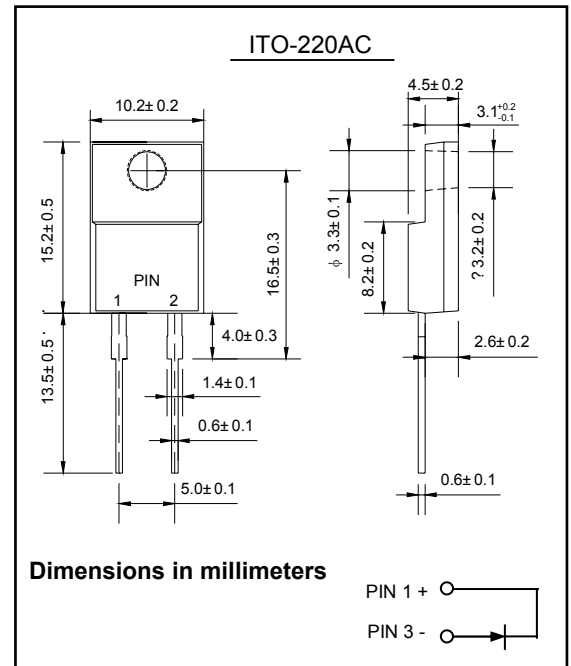
Reverse Voltage - 50 to 600 Volts      Forward Current - 20.0 Ampere

### FEATURES

- Glass Passivated Die Construction
- Super-Fast Switching
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O

### MECHANICAL DATA

- Case: ITO-220AC, Full Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 11.5 cm·kg (10 in·lbs) Max.



### 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 current derate by 20%.

Characteristic	Symbol	MURF 2005	MURF 2010	MURF 2015	MURF 2020	MURF 2030	MURF 2040	MURF 2060	Unit	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>									
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	150	200	300	400	600	V	
DC Blocking Voltage	V <sub>R</sub>									
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	105	140	210	280	420	V	
Average Rectified Output Current @T <sub>C</sub> = 100°C	I <sub>o</sub>	20.0								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	200								A
Forward Voltage @I <sub>F</sub> = 20.0A	V <sub>FM</sub>	0.95			1.3		1.7		V	
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C	I <sub>RM</sub>	10 400								μA
Reverse Recovery Time (Note 1)	t <sub>rr</sub>	35			50				nS	
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	170			150				pF	
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150								°C

Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



# MURF2005 THRU MURF2060 RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

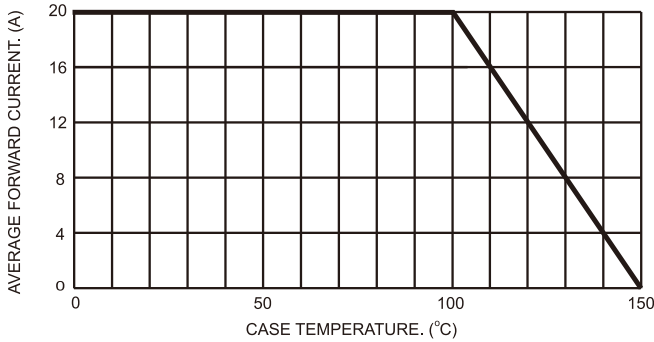


FIG.2- TYPICAL REVERSE CHARACTERISTICS

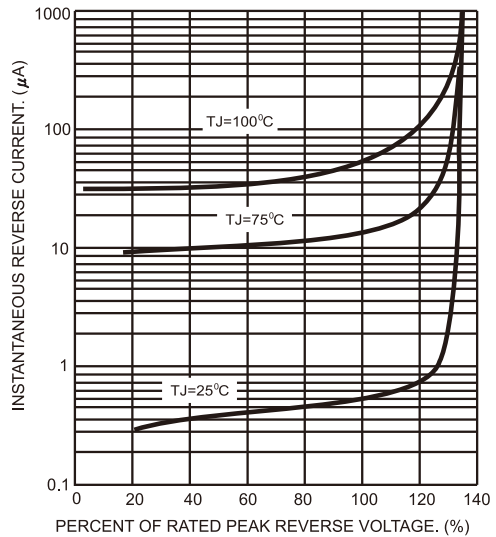


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

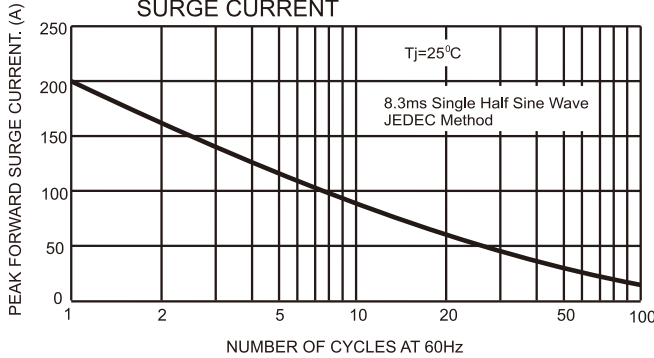


FIG.5- TYPICAL FORWARD CHARACTERISTICS

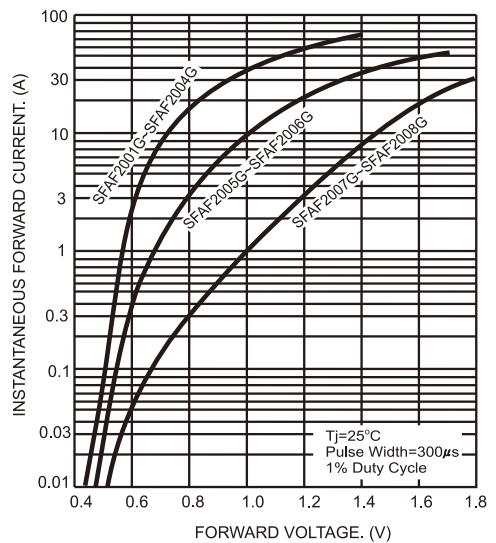


FIG.4- TYPICAL JUNCTION CAPACITANCE

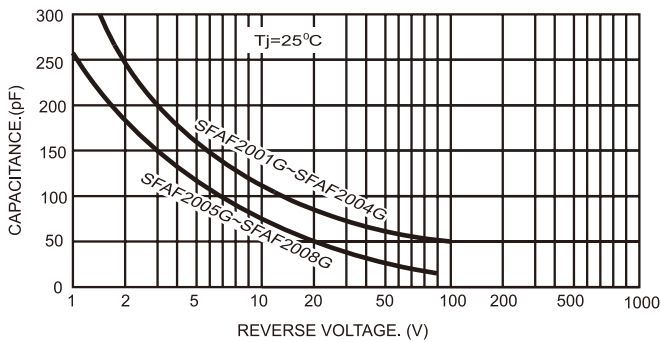


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

