LiKun-micro electronics

MURF3020 – MURF3060

30A GLASS PASSIVATED SUPERFAST RECTIFIER

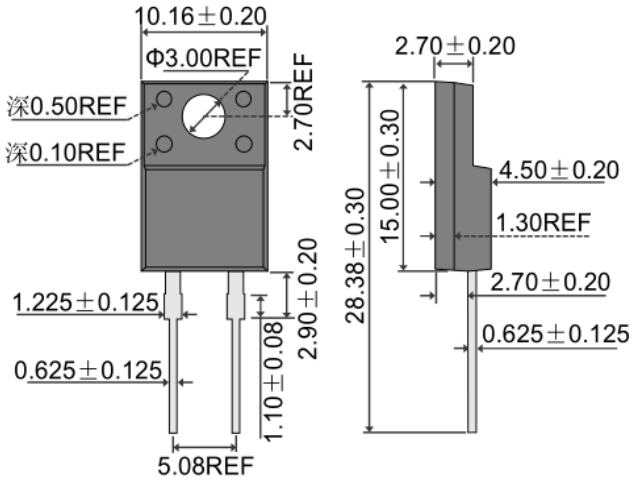
Features

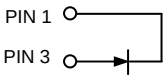
- Fred Chip Planar Construction
- Superfast 35nS and 50nS Recovery Time
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- Soft Recovery Characteristics
- Epoxy Meets UL 94V-0 Classification
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

Mechanical Data

- Case: ITO-220A, Full Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 1.9 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 0.6 N.m Max.
- **Lead Free: For RoHS / Lead Free Version**

ITO-220AC





Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

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

Characteristic	Symbol	MURF3020	MURF3040	MURF3060	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	400	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	280	420	V
Average Rectified Output Current @T_C = 110°C	I_O	30			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	325			A
Forward Voltage @I_F = 30A	V_{FM}	1.1	1.3	1.5	V
Peak Reverse Current @T_C = 25°C At Rated DC Blocking Voltage @T_C = 100°C	I_{RM}	250 1.0			μA mA
Reverse Recovery Time (Note 1)	t_{rr}	35	50		nS
Typical Junction Capacitance (Note 2)	C_J	175		145	pF
Thermal Resistance Junction to Ambient Thermal Resistance Junction to Case	$R_{\theta JA}$ $R_{\theta JC}$	75 3.0			°C/W
RMS Isolation Voltage, t = 1 min	V_{ISO}	1500			V
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175			°C

Note: 1. Measured with I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

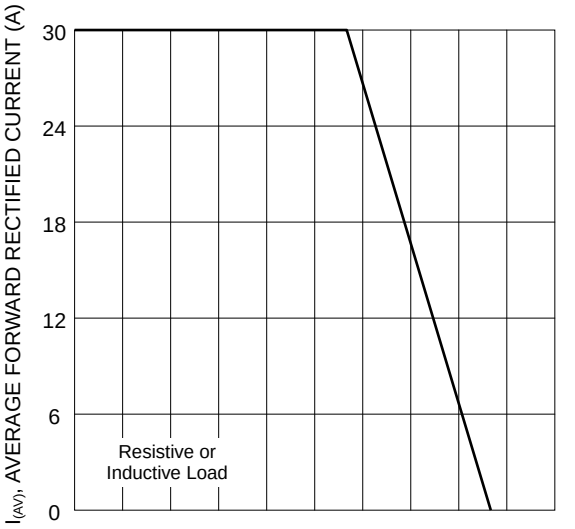


Fig. 1 Forward Current Derating Curve

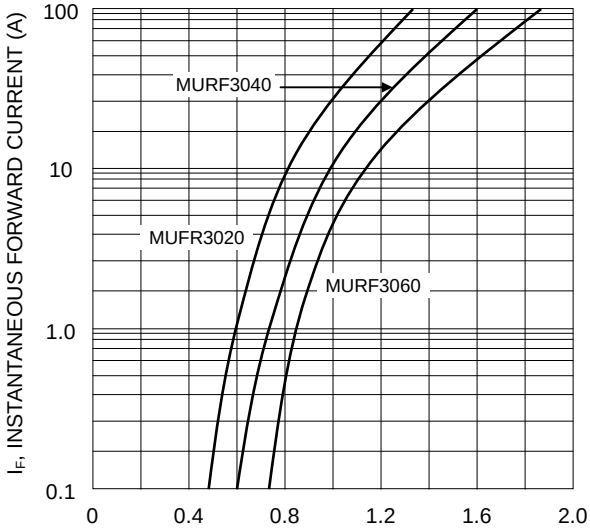


Fig. 2 Typical Forward Characteristics

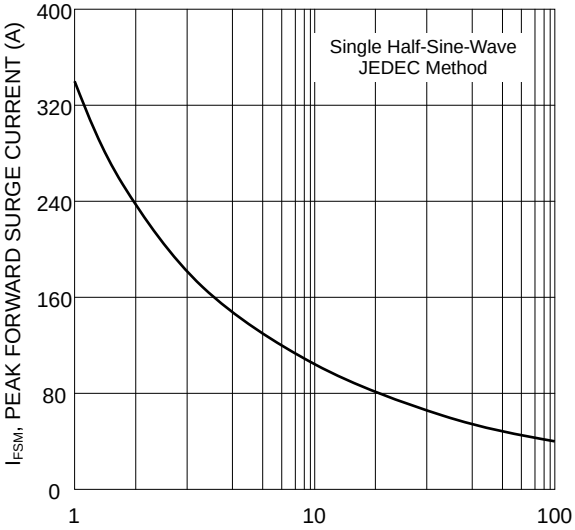


Fig. 3 Forward Surge Current Derating Curve

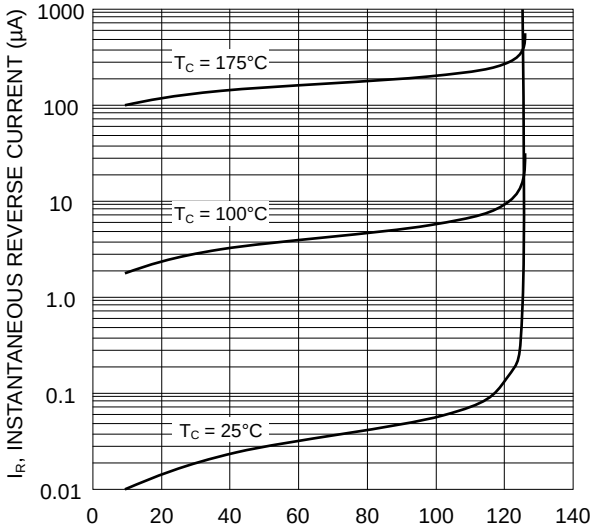


Fig. 4 Typical Reverse Characteristics

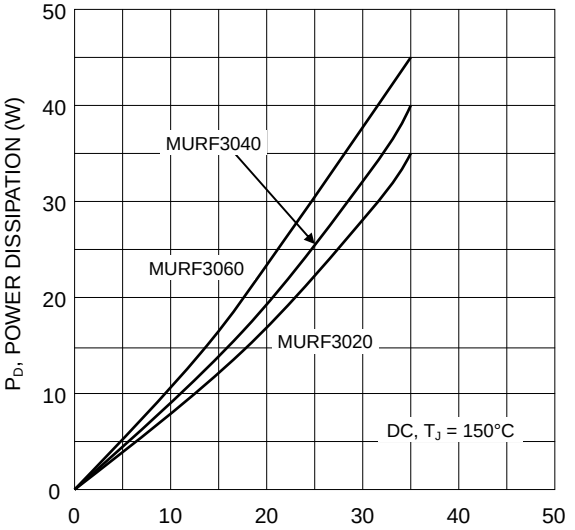


Fig. 5 Forward Power Dissipation

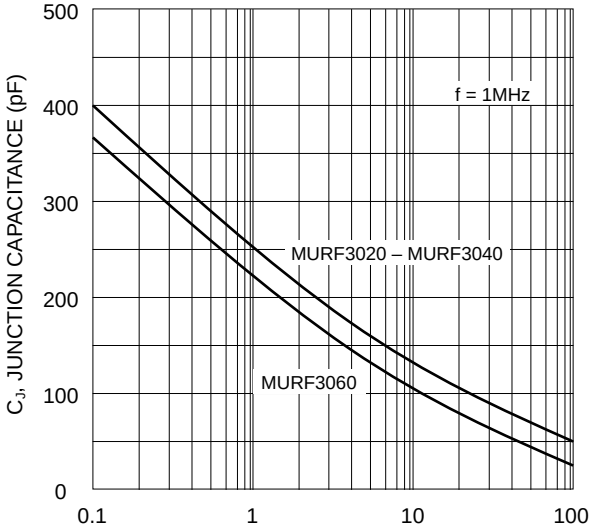
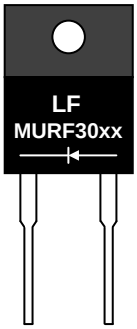


Fig. 6 Typical Junction Capacitance

MARKING INFORMATION



MURF30xx = Device Number
x = 20, 40 or 60
Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

Tube Size L x W x H (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
525 x 31 x 6	50	558 x 150 x 40	1,000	570 x 235 x 170	5,000	11.85

RECOMMENDED SCREW MOUNTING ARRANGEMENT

The full molded plastic package affords a major reduction of hardware as compared to a standard TO-220 package. However, precautions should be made in mounting procedure.

A conical washer should be used to apply proper force to the device. Screw should not be tightened with any type of air-forced torque or equipment that may cause crack on device package.

A layer of thermal grease or thermal pad in the interface will be considerably helpful for heat dissipation.