GOOD-ARK SEMICONDUCTOR

MUR3060F

Ultrafast Recovery Rectifier
Reverse Voltage 600V Forward Current 30A

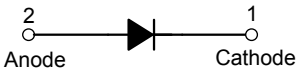
Features

- FRED wafer construction
- Low forward drop voltage, low power loss
- High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21

ITO-220AC

Mechanical Data

- Case: Epoxy, molded
- Finish: All external surfaces corrosion resistant and terminal leads are readily solderable
- Lead temperature for soldering purposes: 260°C Max. for 10 sec



Schematic Diagram

Applications

- SMPS
- Lighting
- UPS

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Working Peak Reverse Voltage	V_{RWM}	600	V
Maximum DC Blocking Voltage	V_{DC}	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	30	A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	300	A
Voltage Rate of Change (Rated V_R)	dv/dt	10000	V/uS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	4.0	°C/W
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	62.5	°C/W
Operating Junction Temperature Range	T_J	-55 to +175	°C
Storage Temperature Range	T_{STG}	-55 to +175	°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward Drop Voltage[1]	V_F	I_F=30A, T_J=25°C	1.36	1.55	V
		I_F=30A, T_J=125°C	-	1.40	
Reverse Leakage Current @ V_R[2]	I_R	T_J=25°C	-	10	uA
		T_J=100°C	-	500	
Reverse Recovery Time	t_{rr}	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	-	65	nS

Note:
1. Pulse test with PW=0.3ms, duty cycle=2%
2. Pulse test with PW=30ms

Ratings and Characteristics Curves (T_A=25°C unless otherwise noted)

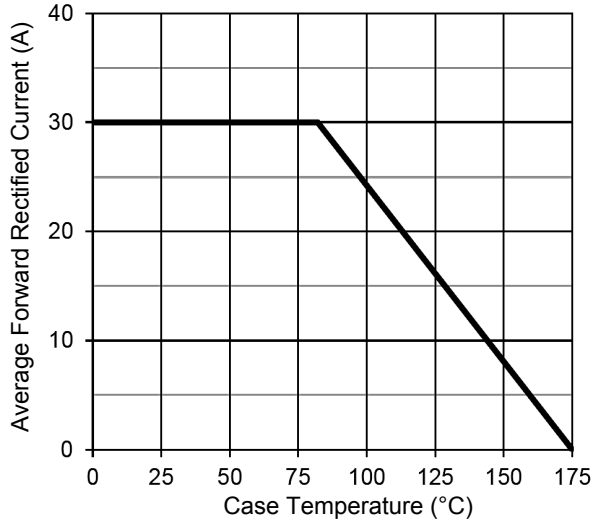


Figure 1. Forward Current Derating Curve

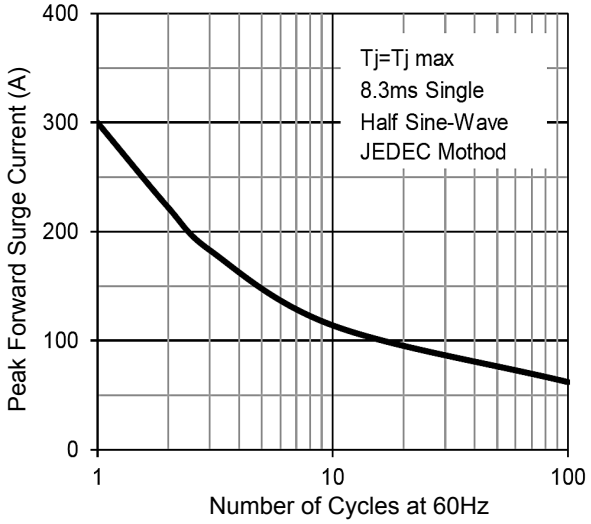


Figure 2. Maximum Non-Repetitive Surge Current

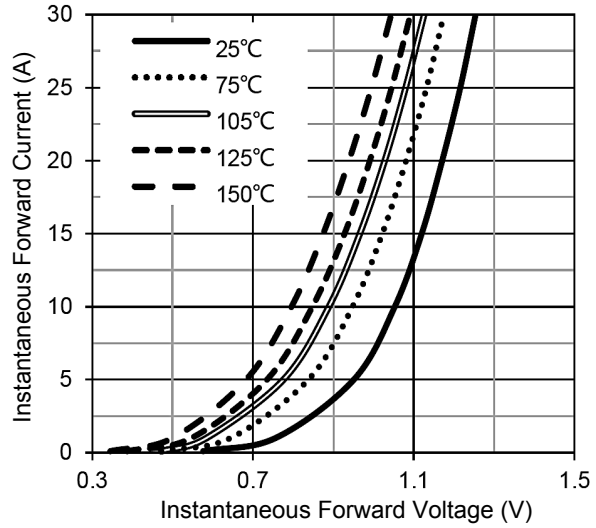


Figure 3. Typical Forward Voltage Characteristics

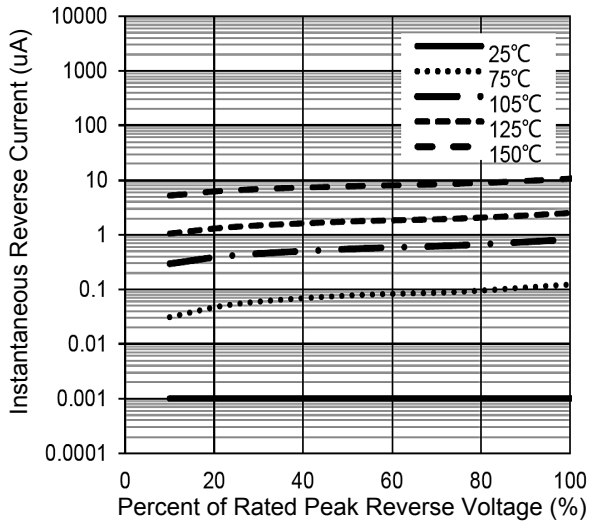


Figure 4. Typical Reverse Current Characteristics

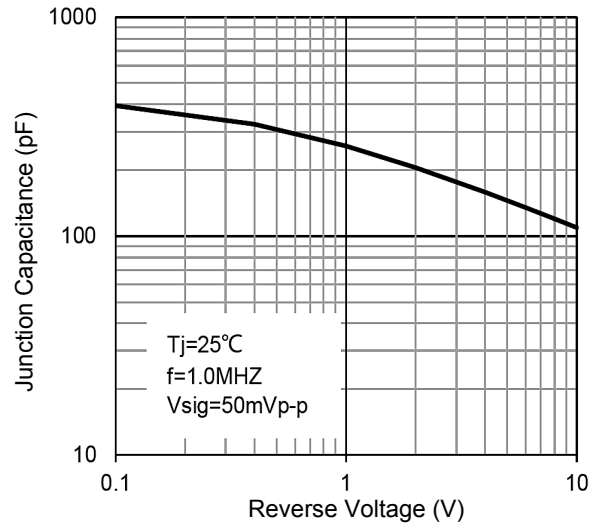


Figure 5. Typical Junction Capacitance

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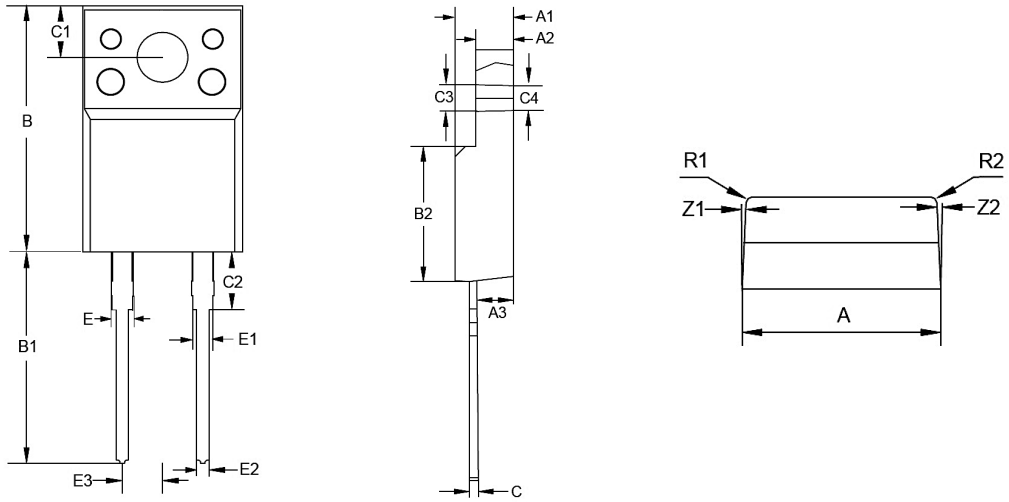
Package Outline Dimensions (ITO-220AC)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	9.90	10.30	0.390	0.406
A1	4.60	4.80	0.181	0.189
A2	2.44	2.64	0.096	0.104
A3	2.25	2.65	0.089	0.104
B	15.50	16.10	0.610	0.634
B1	13.25	13.85	0.522	0.545
B2	9.00	9.40	0.354	0.370
C	0.50	0.70	0.020	0.028
C1	3.10	3.50	0.122	0.138
C2	3.00	3.60	0.118	0.142
C3	3.00	3.40	0.118	0.134
C4	3.00	-	0.118	-
E	1.15	1.55	0.045	0.061
E1	1.17	1.37	0.046	0.054
E2	0.70	0.90	0.028	0.035
E3	2.44	2.64	0.096	0.104
R1	0.30 TYP		0.012 TYP	
R2	0.30 TYP		0.012 TYP	
Z1	3° TYP		3° TYP	
Z2	3° TYP		3° TYP	

Order Information

Device	Package	Marking	Carrier	Quantity
MUR3060F	ITO-220AC	MUR3060F	Tube	50 Pcs / Tube