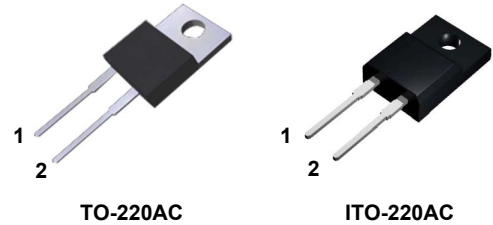


## Features

- 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

## 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<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	GSMUR1540	GSMUR1540F	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	400		V
Working Peak Reverse Voltage	V <sub>RWM</sub>	400		V
Maximum DC Blocking Voltage	V <sub>DC</sub>	400		V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	15		A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	150		A
Voltage Rate of Change (Rated V <sub>R</sub> )	dv/dt	10000		V/uS
Typical Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	62.5		°C/W
Typical Thermal Resistance, Junction to Case	R <sub>θJC</sub>	2.0	4.0	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150		°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150		°C

## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward Drop Voltage <sup>1</sup>	V <sub>F</sub>	I <sub>F</sub> =15A, T <sub>J</sub> =25°C	1.16	1.40	V
		I <sub>F</sub> =15A, T <sub>J</sub> =125°C	-	1.20	
Reverse Leakage Current @ V <sub>R</sub> <sup>2</sup>	I <sub>R</sub>	T <sub>J</sub> =25°C	-	10	uA
		T <sub>J</sub> =100°C	-	500	
Reverse Recovery Time	T <sub>rr</sub>	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>RR</sub> =0.25A	-	50	nS

Note:

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

## Ratings and Characteristics Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

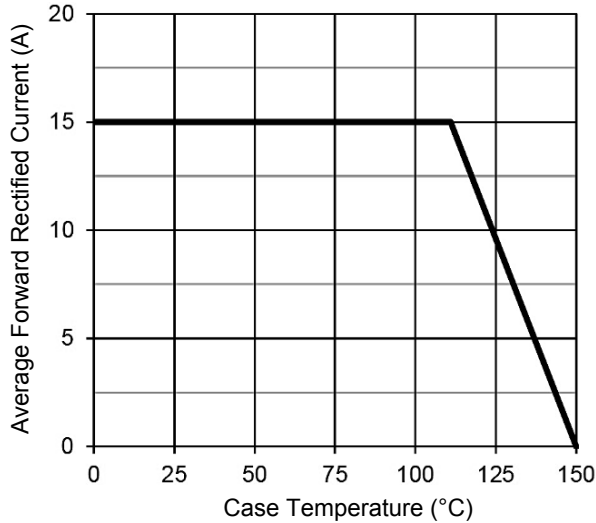


Figure 1. Forward Current Derating Curve

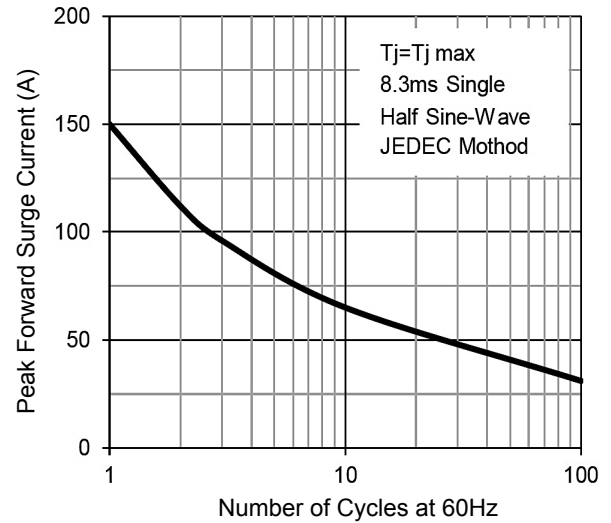


Figure 2. Maximum Non-Repetitive Surge Current

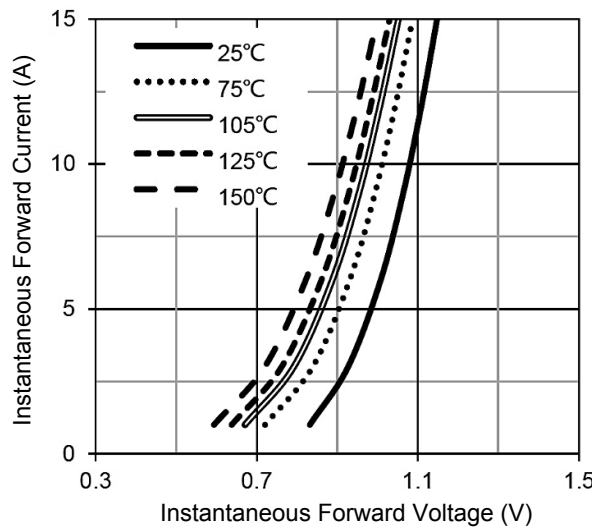


Figure 3. Typical Forward Voltage Characteristics

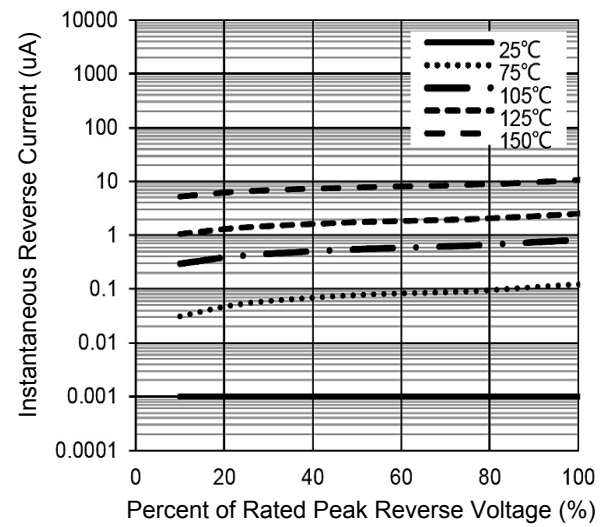


Figure 4. Typical Reverse Current Characteristics

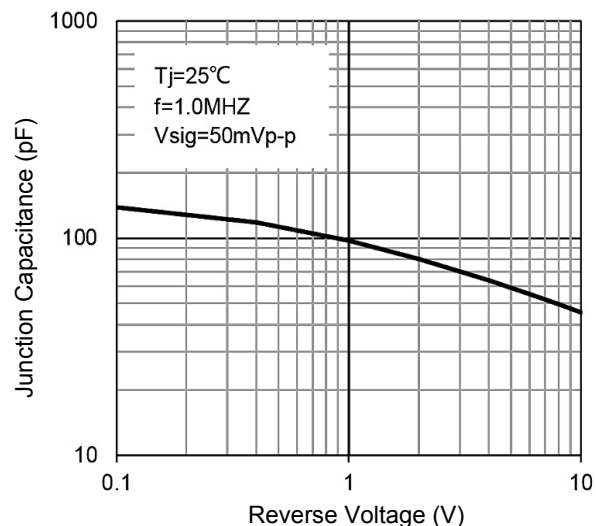
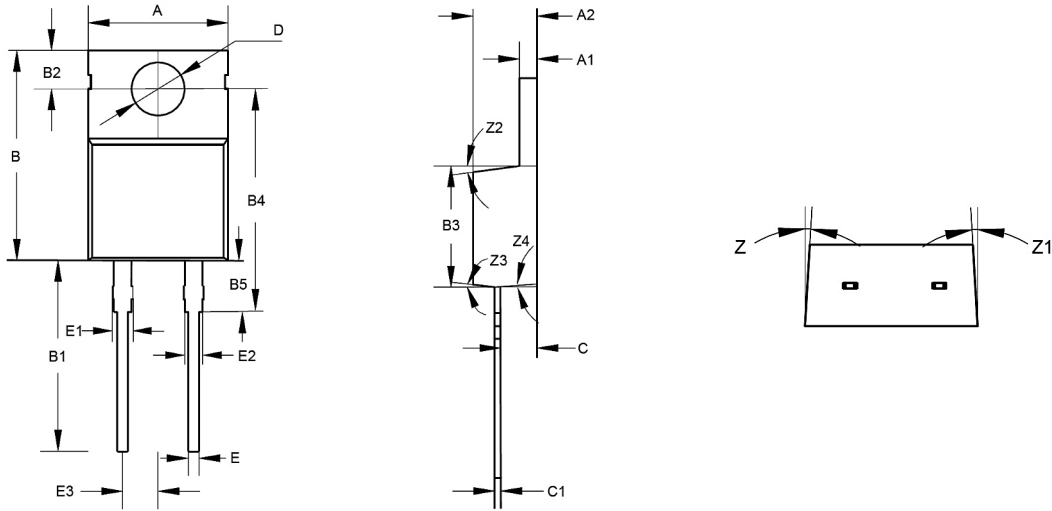


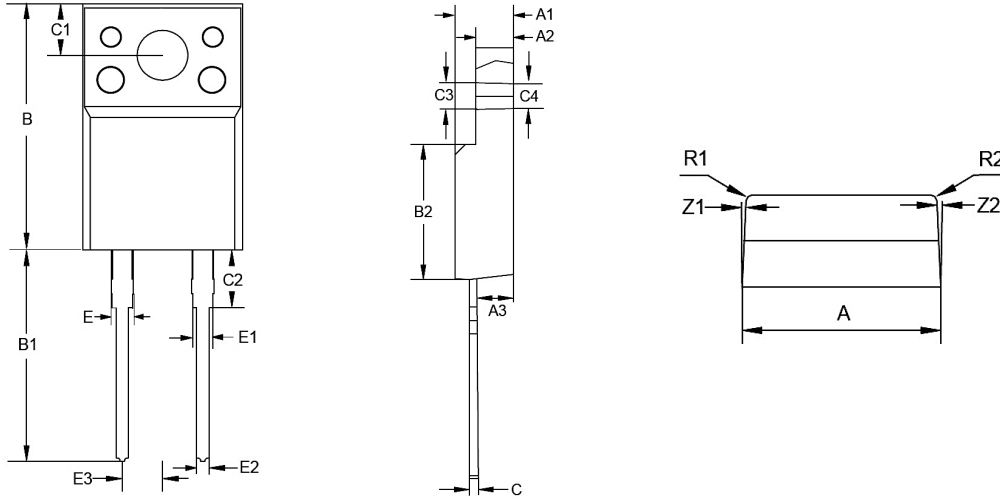
Figure 5. Typical Junction Capacitance

## Package Outline Dimensions (TO-220AC)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	9.80	10.20	0.386	0.402
A1	1.17	1.37	0.046	0.054
A2	4.50	4.70	0.177	0.185
B	14.50	15.50	0.571	0.610
B1	13.20	14.20	0.520	0.559
B2	2.65	2.85	0.104	0.112
B3	8.50	8.90	0.335	0.350
B4	15.50	16.50	0.610	0.650
B5	3.40	4.00	0.134	0.157
C	2.30	2.90	0.091	0.114
C1	0.28	0.48	0.011	0.019
D	3.70	3.90	0.146	0.154
E	0.68	0.88	0.027	0.035
E1	1.20	1.60	0.047	0.063
E2	1.17	1.37	0.046	0.054
E3	2.44	2.64	0.096	0.104
Z	3° TYP		3° TYP	
Z1	3° TYP		3° TYP	
Z2	7° TYP		7° TYP	
Z3	7° TYP		7° TYP	
Z4	1.5° TYP		1.5° TYP	

## 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
GSMUR1540	TO-220AC	MUR1540	Tube	50 Pcs / Tube
GSMUR1540F	ITO-220AC	MUR1540F	Tube	50 Pcs / Tube

For more information, please contact us at: [inquiry@goodarksemi.com](mailto:inquiry@goodarksemi.com)