

Features

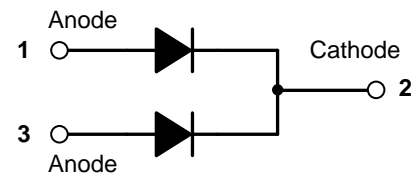
- FRED wafer construction
- Low forward drop voltage, low power loss
- High surge current capability
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



TO-247

Applications

- SMPS
- Adapter
- Server Power



Schematic Diagram

Mechanical Data

- Case: Epoxy, Molded
- Weight: 6.0 grams (approximately)
- Finish: all external surfaces are corrosion resistant and terminal leads are readily solderable
- Lead temperature for soldering purposes: 260°C Max. for 10sec
- Shipped 30 units per plastic tube

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	400	V
Working Peak Reverse Voltage	V_{RWM}	400	V
Maximum DC Blocking Voltage	V_{DC}	400	V
Maximum Average Forward	$I_{F(AV)}$	30	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load Per Diode	I_{FSM}	150	A
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.8	$^{\circ}\text{C/W}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	62.5	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_J	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics (T_J=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Typ	Max	Unit
Forward Drop Voltage ¹	V _F	I _F =15A, T _J =25°C	1.16	1.40	V
		I _F =15A, T _J =125°C	-	1.20	
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	-	50	nS

Note:

1. Pulse test: pulse width = 0.3ms, duty cycle = 2%.
2. Pulse test: pulse width = 30ms.

Typical Electrical and Thermal Characteristic Curves

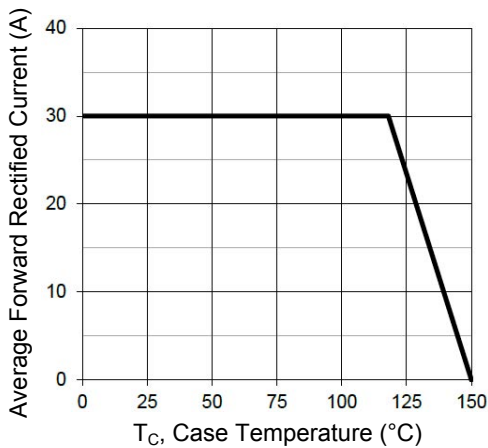


Figure 1. Forward Current Derating Curve

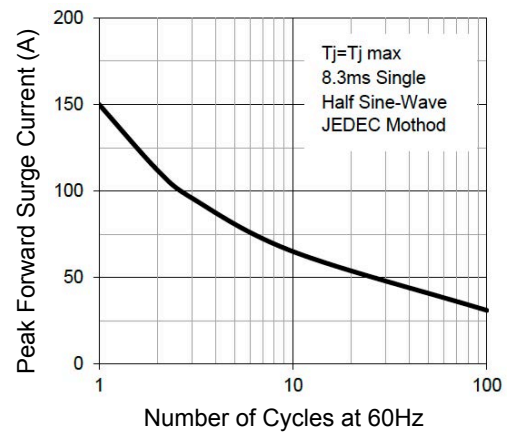


Figure 2. Maximum Non-Repetitive Surge Current

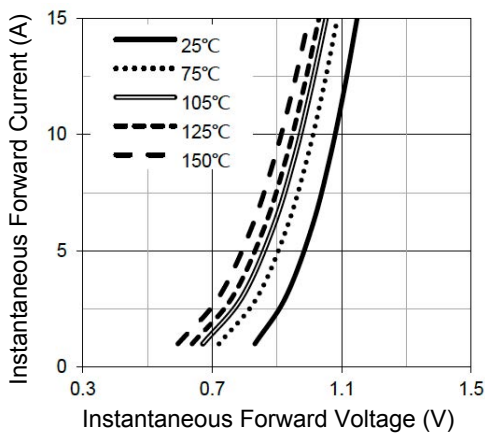


Figure 3. Typical Forward Voltage Characteristics

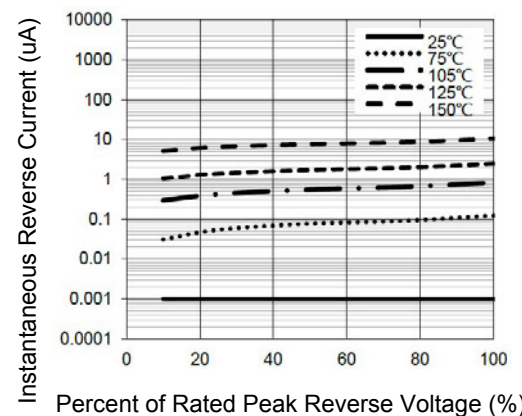


Figure 4. Typical Reverse Current Characteristics

Typical Electrical and Thermal Characteristic Curves

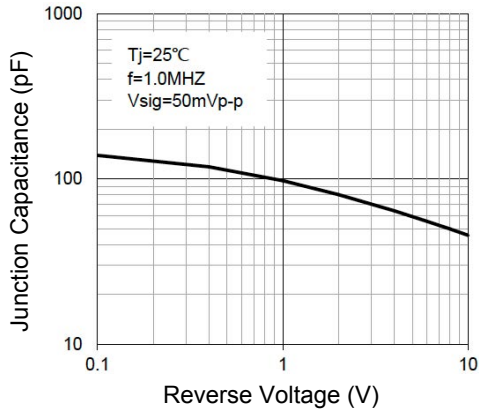
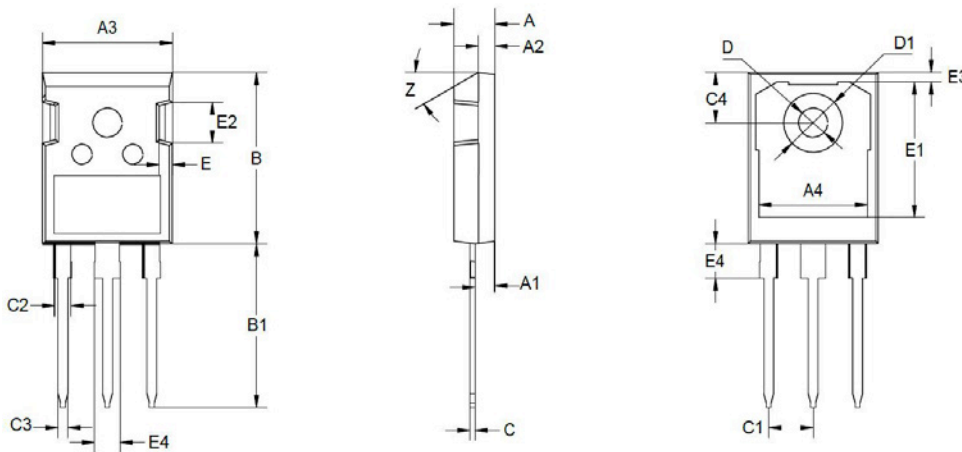


Figure 5. Typical Junction Capacitance

Package Outline Dimensions (TO-247)



Symbol	Dimensions in Millimeters			Symbol	Dimensions in Millimeters		
	Min	Nom	Max		Min	Nom	Max
A	4.70	5.00	5.20	C3	1.10	1.20	1.30
A1	2.30	-	2.50	C4	6.04	6.15	6.30
A2	1.90	2.00	2.10	D	3.50	3.60	3.70
A3	15.48	15.88	16.28	D1	7.00	7.19	7.40
A4	13.06	13.26	13.56	E	1.50	1.60	1.70
B	20.80	20.95	21.10	E1	-	16.55	-
B1	19.80	20.00	20.32	E2	4.90	5.00	5.10
C	0.50	0.60	0.70	E3	0.95	1.17	1.35
C1	5.34	5.44	5.54	E4	-	4.17	4.50
C2	-	2.00	-	Z	-	30°	-