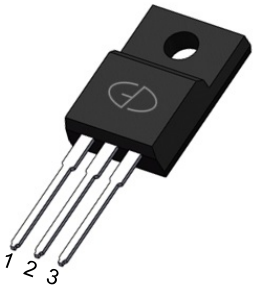
20A,800V Ultrafast Recovery Rectifier

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



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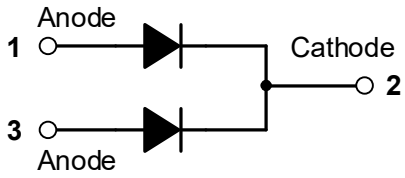
Applications

- SMPS
- Lighting
- UPS



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
- Shipped 50 units per plastic tube

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

Parameter	Symbol	MUR2080FCT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	800	V
Working peak reverse voltage	V_{RWM}	800	V
Maximum DC blocking voltage	V_{DC}	800	V
Maximum average forward rectified current	$I_{F(AV)}$	10	A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80	A
Voltage rate of change (rated V_R)	dv/dt	10000	V/us
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Thermal-Mechanical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Case	R_{thJC}	4.0	°C /W
Thermal Resistance, Junction to Ambient	R_{thJA}	62.5	°C /W

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

Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward drop voltage *(Note1)*	V_F	I_F=10A, T_J =25°C	1.85	2.20	V
		I_F=10A, T_J =125°C	-	2.05	
Reverse leakage current @VR *(Note2)*	I_R	T_J =25°C	-	10	uA
		T_J =100°C	-	500	
Reverse recovery time	trr	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	-	55	ns

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

Note 2: Pulse test with PW=30ms.

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

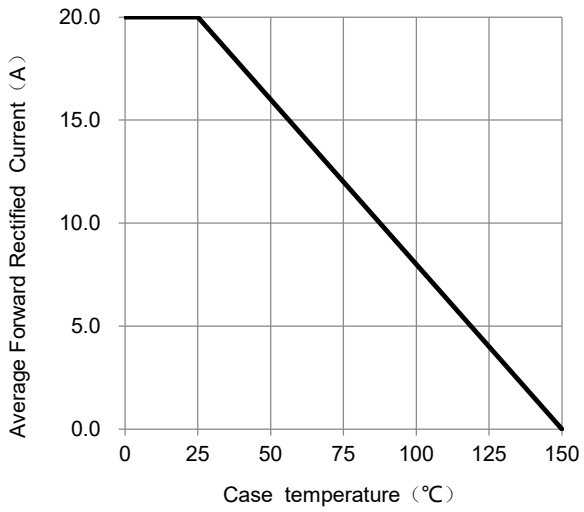


Fig.1 – Forward Current Derating Curve

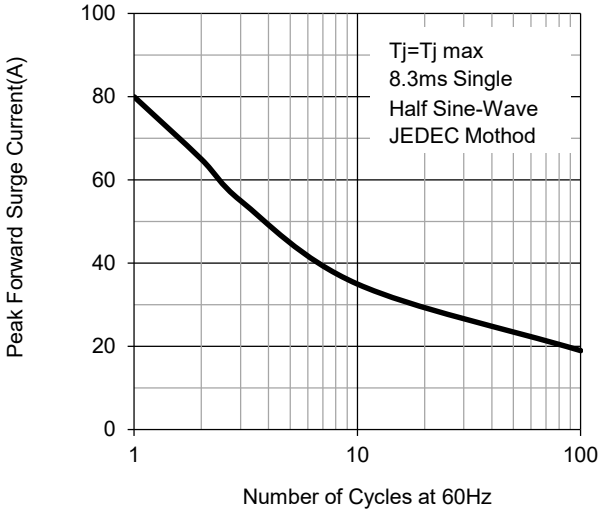


Fig.2 – Maximum Non-Repetitive Surge Current

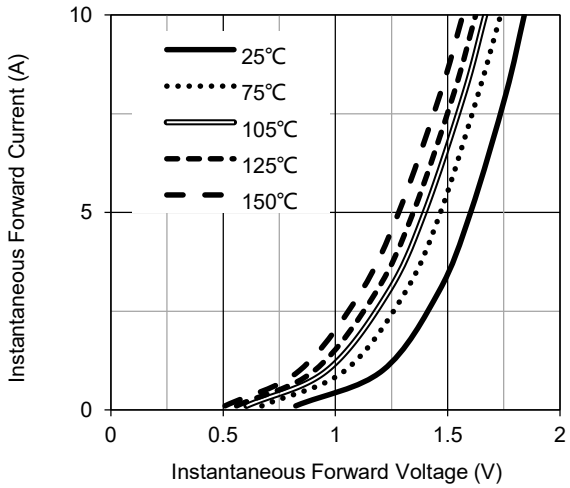


Fig.3 – Typical Forward Voltage Characteristics

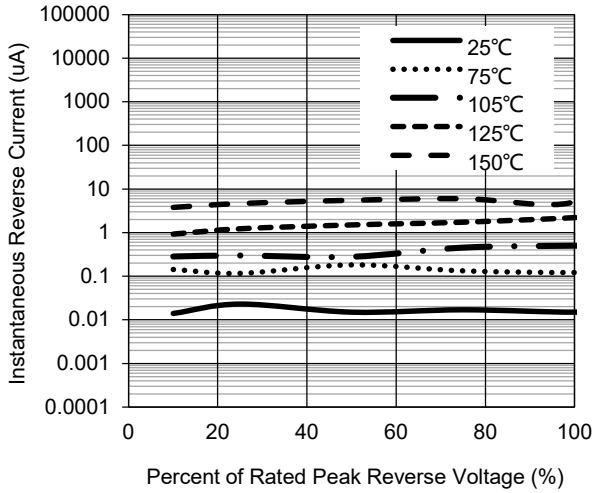


Fig.4 – Typical Reverse Current Characteristics

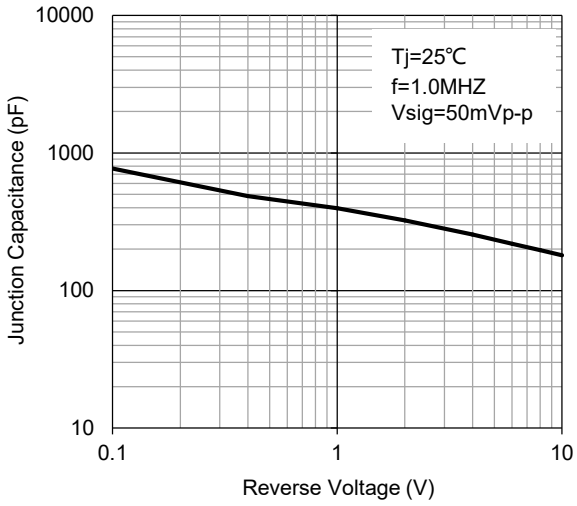


Fig.5 – Typical Junction Capacitance

Package Outline Dimensions (Unit: millimeters)

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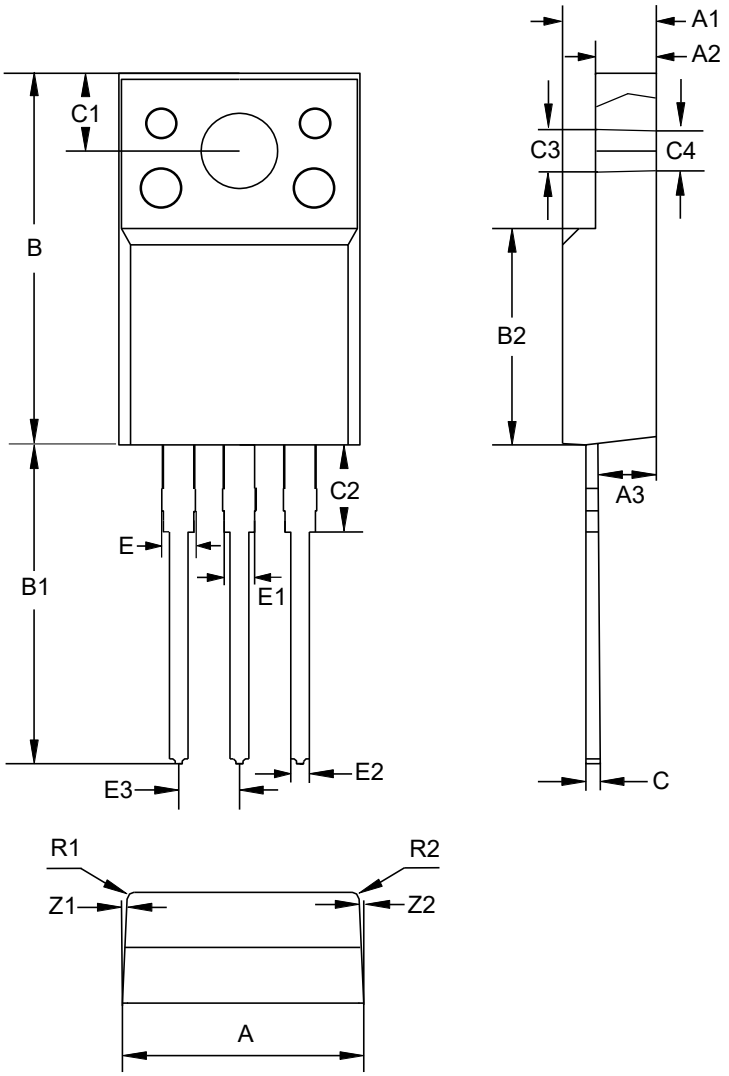

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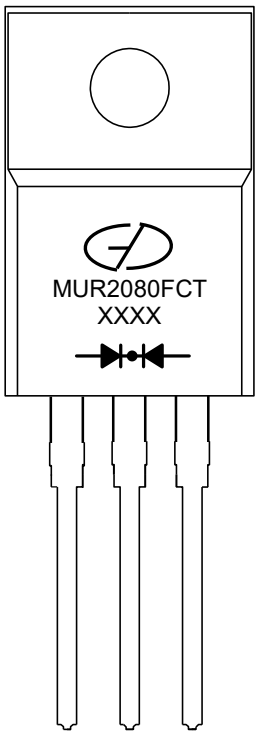
	Min.	Nom.	Max.		Min.	Nom.	Max.
A	9.9	10.1	10.3	C3	3.0	3.2	3.4
A1	4.6	4.7	4.8	C4	3.0	-	-
A2	2.44	2.54	2.64	E	1.15	1.35	1.55
A3	2.25	2.45	2.65	E1	1.17	1.27	1.37
B	15.5	15.8	16.1	E2	0.7	0.8	0.9
B1	13.25	13.55	13.85	E3	2.44	2.54	2.64
B2	9.0	9.2	9.4	R1	-	0.3	-
C	0.5	0.6	0.7	R2	-	0.3	-
C1	3.1	3.3	3.5	Z1	-	3°	-
C2	3.0	3.3	3.6	Z2	-	3°	-

Marking Outline



1. Logo Mark:
2. Part Name: MUR2080FCT
3. Date Code: XXXX
4. Polarity :

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