

### Features

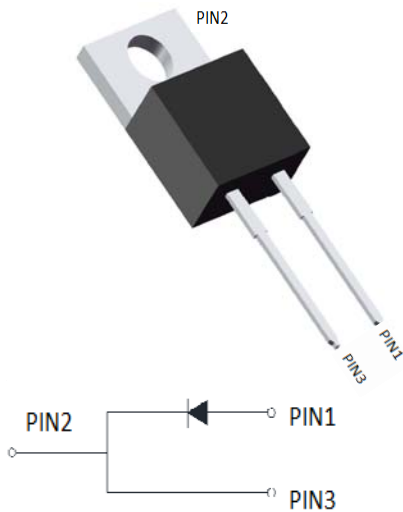
- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

### Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

### Mechanical Data

- **Package:** TO-220AC  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked



### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR8100
Device marking code			MUR8100
Repetitive Peak Reverse Voltage	VRRM	V	1000
Average Rectified Output Current @60Hz sine wave, R-load, T <sub>c</sub> =99°C	I <sub>O</sub>	A	8
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T <sub>a</sub> =25°C	I <sub>FSM</sub>	A	100
Current Squared Time @1ms≤t≤8.3ms T <sub>j</sub> =25°C,	I <sup>2</sup> t	A <sup>2</sup> s	41
Storage Temperature	T <sub>stg</sub>	°C	-55 ~ +150
Junction Temperature	T <sub>j</sub>	°C	-55 ~ +150

### ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MUR8100
Maximum instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	I <sub>FM</sub> =8.0A	2.25
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	uA	V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub> =25°C	10
	I <sub>RRM2</sub>		V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub> =125°C	100
Reverse Recovery Time	T <sub>rr</sub>	ns	I <sub>F</sub> =0.5A I <sub>RR</sub> =0.25A I <sub>RM</sub> =1A	50

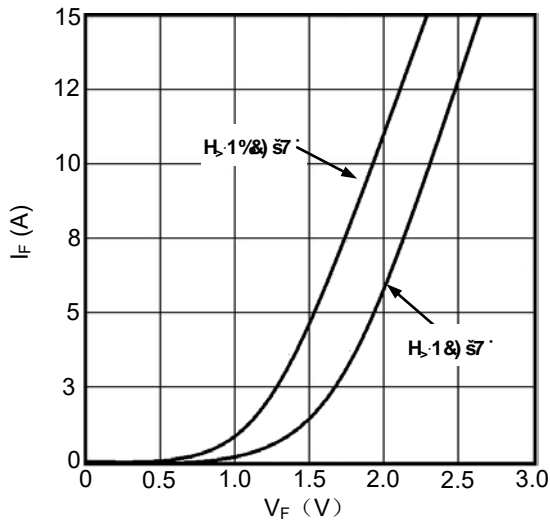


Fig1. Forward Voltage Drop vs Forward Current

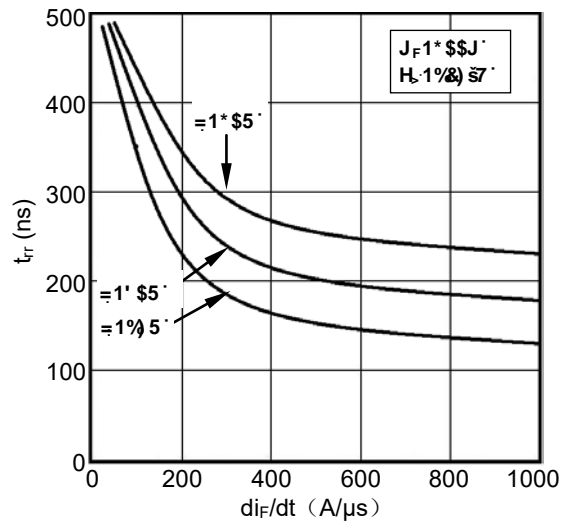


Fig2. Reverse Recovery Time vs  $di_F/dt$

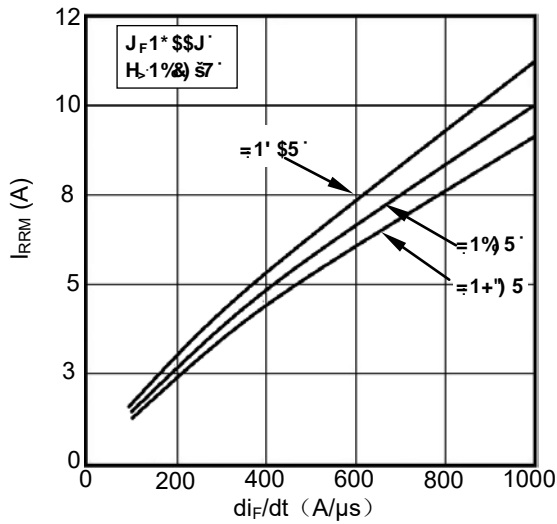


Fig3. Reverse Recovery Current vs  $di_F/dt$

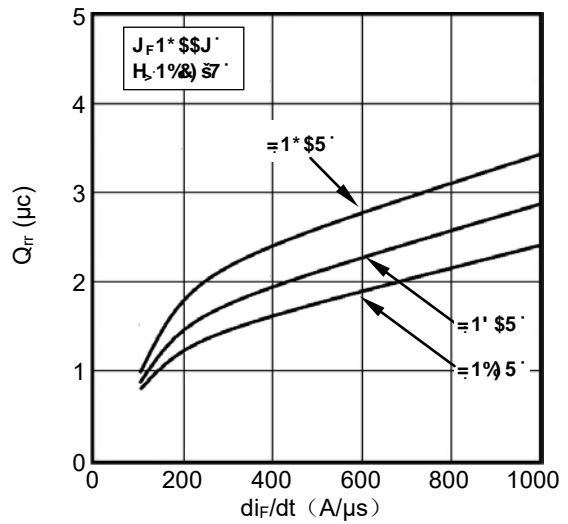


Fig4. Reverse Recovery Charge vs  $di_F/dt$

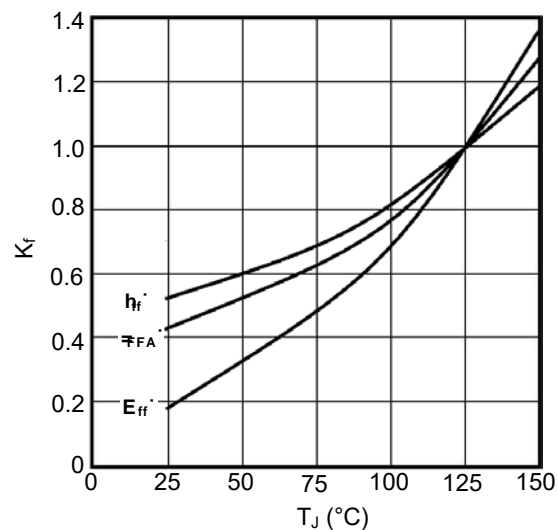


Fig5. Dynamic Parameters vs Junction Temperature

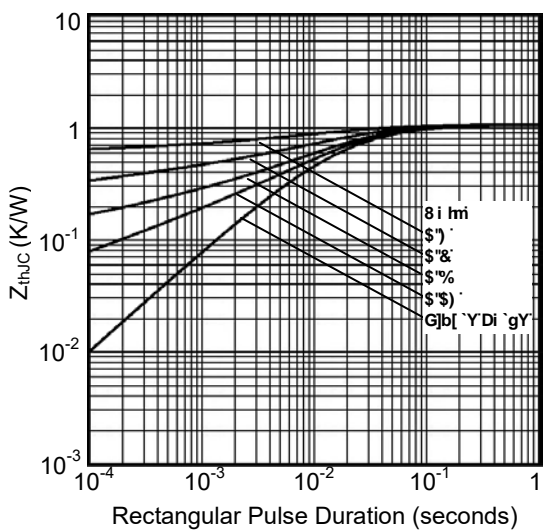


Fig6. Transient Thermal Impedance

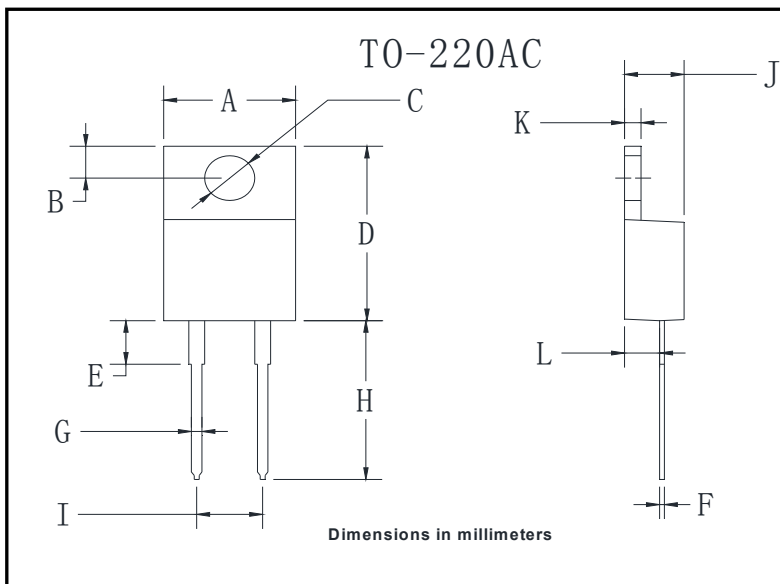
■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MUR8100
Thermal Resistance	Between junction and case	R <sub>θj-c</sub>	°C/W	4.0

■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR8100	Approximate 0.31	2500	2500	25000	Reel

■ Outline Dimensions



TO-220AC		
Dim	Min	Max
A	9.5	10.9
B	2.22	3.27
C	3.34	4.31
D	14.5	15.5
E	3.16	4.46
F	0.28	0.64
G	0.68	0.94
H	13.06	14.62
I	4.55	5.60
J	4.04	5.1
K	1.14	1.4
L	2.14	3.19

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