

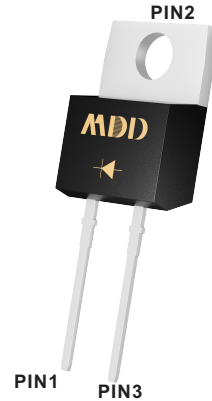
Fast Recovery Epi Diodes

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
- ◆ Solder dip 275 °C max. 7s, per JESD 22-B106

TO-220AC

RoHS
COMPLIANT



Mechanical Data

Case : JEDEC TO-220AC Molded plastic body

Weight : 0.065 ounce, 1.855 grams

Terminals: Lead solderable per MIL-STD-202, Method 208
Lead free finish, RoHS compliant

Case Material: “Green” molding compound, UL flammability classification 94V-0, “Halogen-free”.

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	MUR820CT	MUR840CT	MUR860CT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS voltage	V_{RMS}	140	280	420	V
Maximum DC blocking Voltage	V_{DC}	200	400	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	8			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	100			A
Instantaneous forward voltage at 8 A	V_F	1.0	1.3	1.6	V
Maximum Reverse Recovery Time ⁽¹⁾	t_{rr}	35			ns
Maximum instantaneous reverse current at rated DC blocking voltage $T_J=25^{\circ}C$ $T_J=125^{\circ}C$	I_R	10 500			uA
Maximum Thermal Resistance Junction To Case	$R_{\theta JC}$	4			°C/W
Operation Junction Temperature and Storage Temperature	T_J, T_{stg}	-55 ~ +150			°C

NOTE 1: $I_F=0.5A, I_R=1A, I_{rr}=0.25A$

Ratings And Characteristic Curves

Fig.1 Typical Forward Current Derating Curve

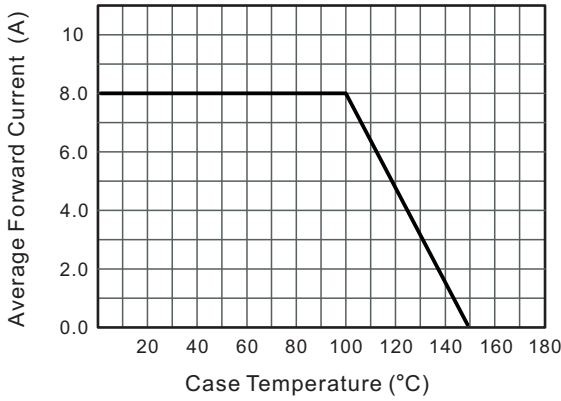


Fig.2 Typical Reverse Characteristics

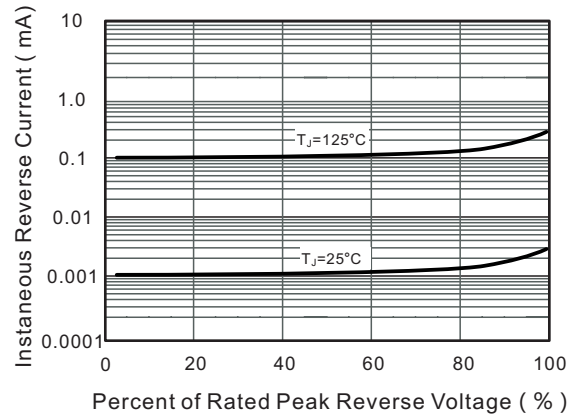


Fig.3 Typical Forward Characteristic

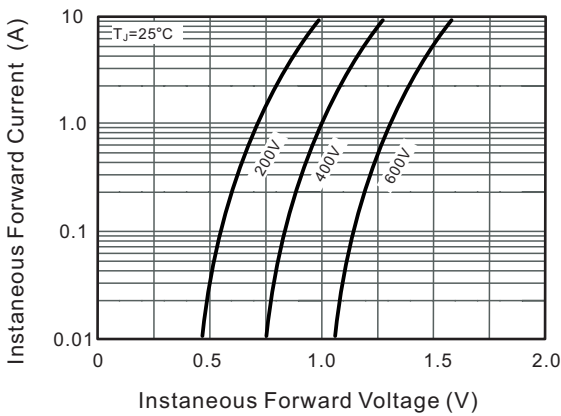
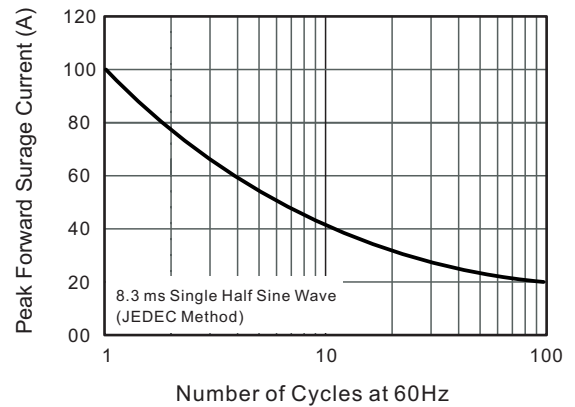


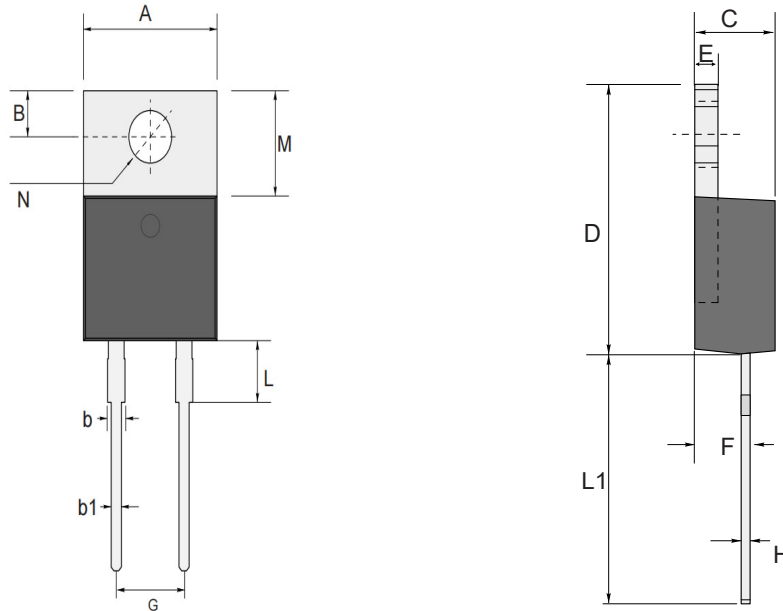
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.

Outline

TO-220AC Package Outline Dimensions



TO-220ACW mechanical data

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N
mm	max	10.45	2.94	1.77	0.94	4.76	16.0	1.40	4.76	5.1 typ.	0.64	4.20	14.79	6.5	3.84 typ.
	min	9.85	2.54	1.14	0.62	4.42	14.6	1.14	2.49		0.35	2.80	13.00	6.3	
mil	max	411	116	70	37	187	630	55	187	201typ.	25	165	582	256	151 typ.
	min	388	100	45	24	174	575	45	98		14	110	512	248	

Important Notice and Disclaimer

Microdiode Electronics (Shenzhen) reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Microdiode Electronics (Shenzhen) makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Microdiode Electronics (Shenzhen) assume any liability for application assistance or customer product design. Microdiode Electronics (Shenzhen) does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Microdiode Electronics (Shenzhen).

Microdiode Electronics (Shenzhen) products are not authorized for use as critical components in life support devices or systems without express written approval of Microdiode Electronics (Shenzhen).