

Fast Recovery Epi Diodes

Reverse Voltage -200 TO 600 V

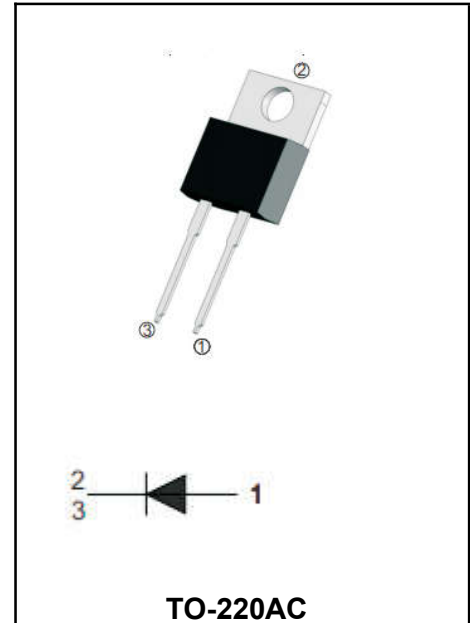
Forward Current - 20 A

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

Mechanical Data

- ◆Case: TO-220AC
- ◆Approx. Weight: 2.1g (0.074oz)
- ◆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 (Per Leg) At Ta=25°C Unless Otherwise Specified

Parameter	Symbols	MUR2020AC	MUR2040AC	MUR2060AC	Units
Maximum Repetitive 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 @Tc=100°C	$I_{F(AV)}$	20			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	250			A
Instantaneous forward voltage at 30A	V_F	1.0	1.3	1.6	V
Maximum instantaneous reverse current at rated DC blocking voltage	I_R	10 500			uA
Maximum Reverse Recovery Time NOTE 1	t_{rr}	35			nS
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

Note1: Reverse recovery test conditions IF=0.5A, IR=1.0A, Irr=0.25A

Fig.1 Typical Forward Current Derating Curve

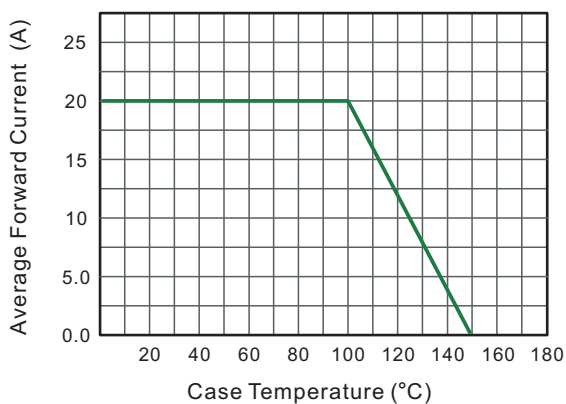


Fig.2 Typical Reverse Characteristics

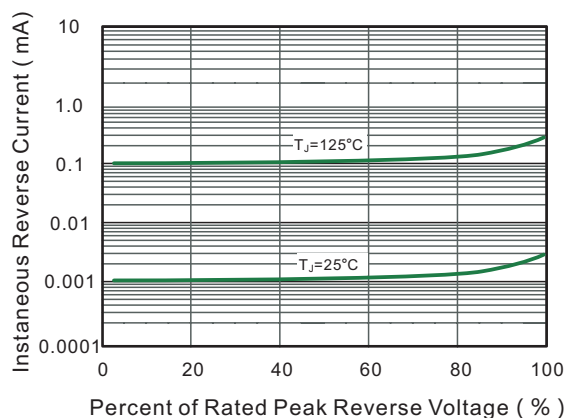


Fig.3 Typical Forward Characteristic

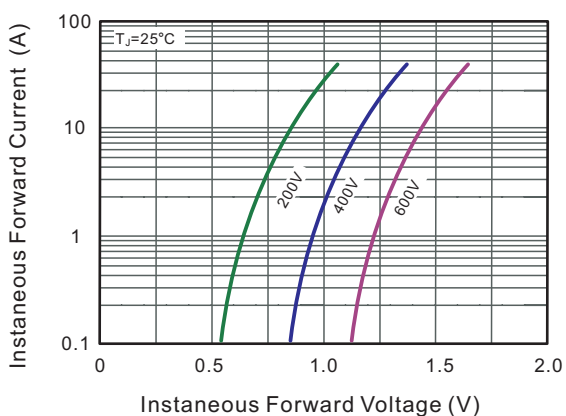
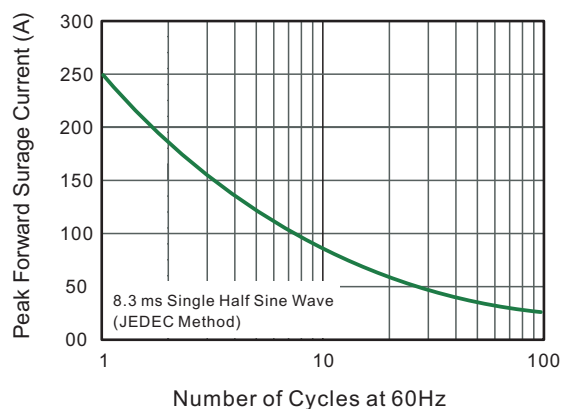


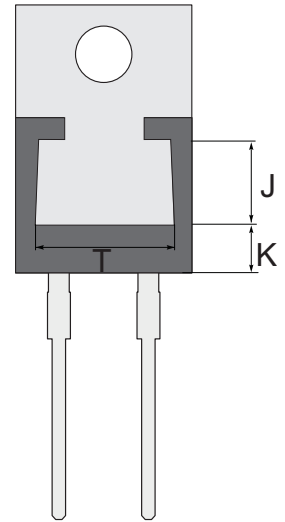
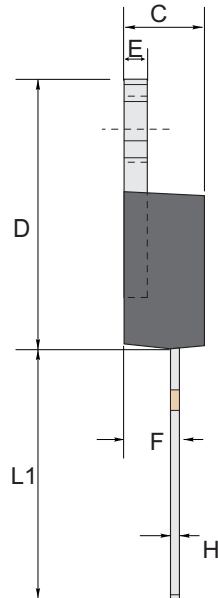
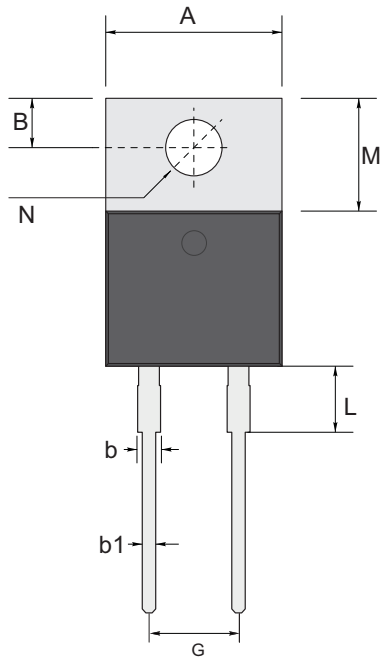
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline Dimensions Millimeters

Package Outline
Through Hole Package ; 2 leads

TO-220AC



TO-220AC mechanical data

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N	J	T	K
mm	max	10.45	2.94	1.77	0.94	4.76	16.0	1.40	3.37	5.1 typ.	0.64	4.20	14.79	6.39 typ.	3.84 typ.	4.65 ref.	7.7 ref.	3.22 ref.
	typ	9.94	2.74	1.27	0.81	4.57	15.09	1.27	3.07		0.38	3.89	13.18					
	min	9.85	2.54	1.14	0.62	4.42	14.6	1.14	2.77		0.35	2.80	13.08					
mil	max	411	116	70	37	187	630	55	133	201 typ.	25	165	582	252 typ.	151 typ.	183 ref.	303 ref.	127 ref.
	typ	391	108	50	32	180	594	50	121		15	153	519					
	min	388	100	45	24	174	575	45	109		14	110	515					