



MUR2065-TF2

Fast Recovery EPI Diode

TO-220F-2L

Reverse Voltage - 650V

Forward Current - 20A

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

Marking:MUR2065

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



ROHS
COMPLIANT



Parameter	Symbol	Value	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	650	V
Maximum RMS Voltage	V_{RMS}	450	V
Maximum DC Blocking Voltage	V_{DC}	650	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	20	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load(JEDEC method)	I_{FSM}	200	A
Typical Thermal Resistance (P.C.B. mounted with 3.81x3.81cm copper pad areas.)	$R_{\theta JA}$	65	$^{\circ}\text{C}/\text{W}$
	$R_{\theta JC}$	4	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	-55~+155	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~+155	$^{\circ}\text{C}$

Electrical Characteristics($T_J=25^{\circ}\text{C}$ unless otherwise noted)

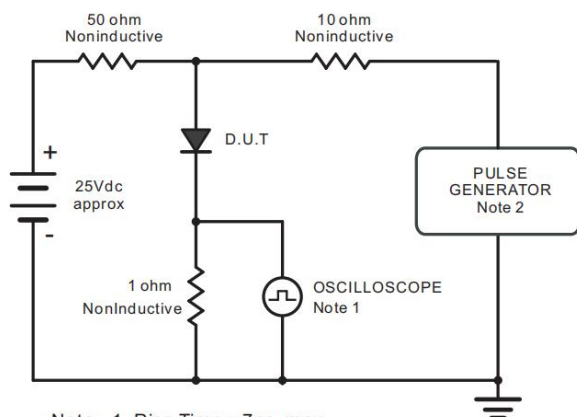
Parameter	Symbol	Test condition	Min	Typ	Max	Units
Forward Voltage	V_F	$I_F=20\text{A}$		1.4	1.6	V
Reverse Current	I_R	$V_R=650\text{V}$			10	μA
		$V_R=650\text{V}, T_J=125^{\circ}\text{C}$			500	μA
Reverse Recovery Time	T_{rr}	$I_F=0.5\text{A}, I_R=1\text{A}, I_{tr}=0.25\text{A}$		35	45	ns
		$I_F=1\text{A}, V_R=30\text{V}, di/dt=-200\text{A}/\mu\text{s}$		30		ns



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Typical Characteristics

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1 megohm, 22pF.
2. Rise Time = 10ns, max.
Source Impedance = 50 ohms.

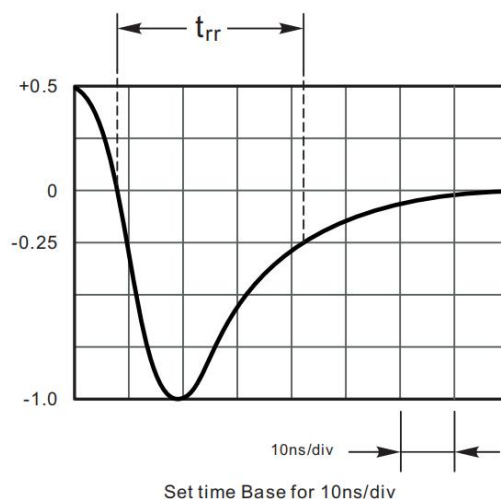


Fig.2 Forward Current Derating Curve

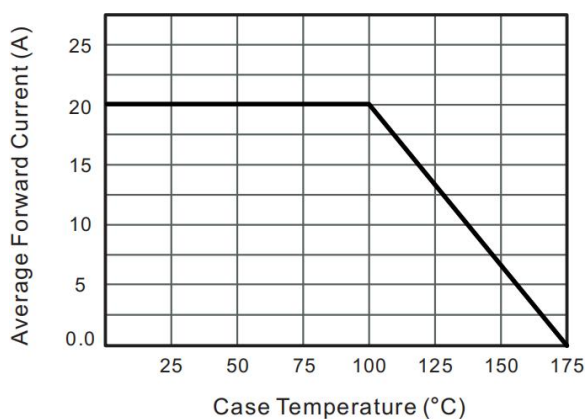


Fig.3 Typical Instantaneous Reverse Characteristics

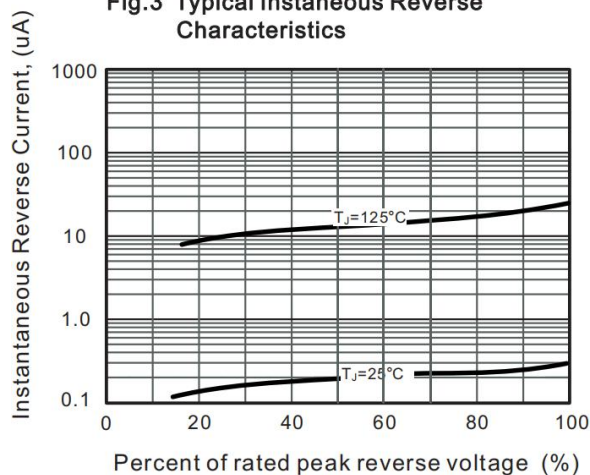


Fig.4 Typical Forward Characteristic

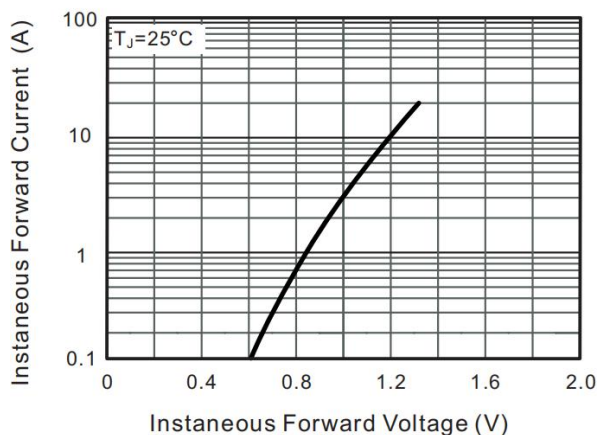
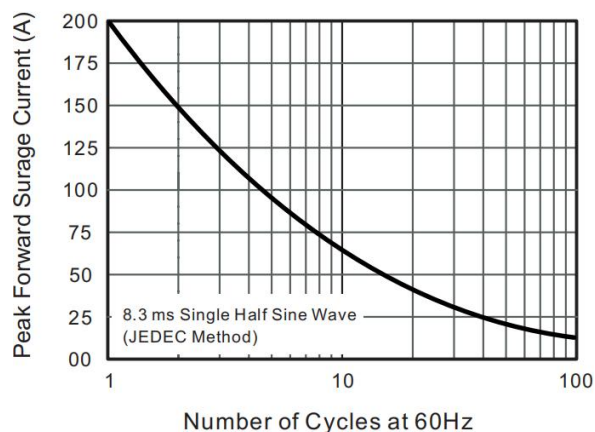


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



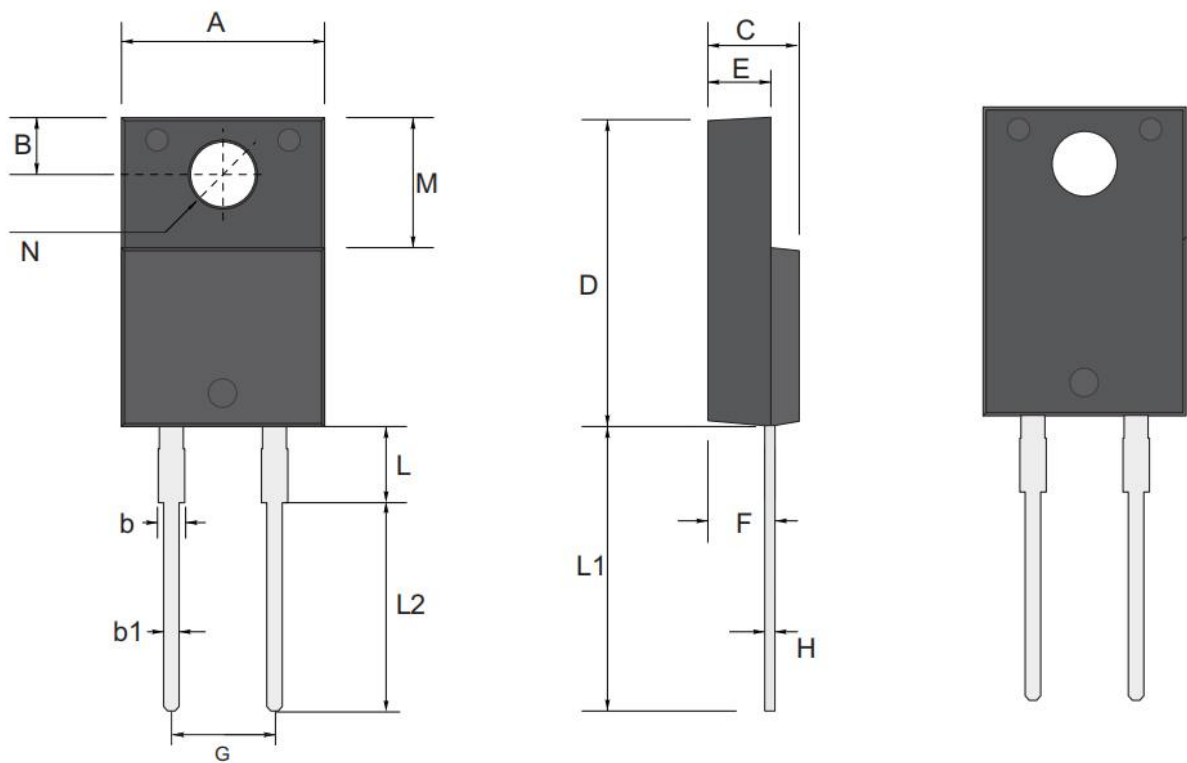


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Package Information

TO-220F-2L

Dimensions in mm



TO-220F-2L mechanical data

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	L2	M	N
mm	max	10.5	2.85	1.4	0.8	4.7	16.0	2.9	3.55	5.1 typ.	0.70	2.9	14.3	11.8	7.0	3.4 typ.
	typ	10.0	2.70	1.2	0.6	4.5	15.0	2.7	3.25		0.55	2.5	13.5	11.0	6.8	
	min	9.85	2.54	1.1	0.5	4.4	14.7	2.5	2.95		0.41	2.3	13.0	10.5	6.3	
mil	max	413	112	55	31	185	630	114	140	201 typ.	28	114	563	465	276	134 typ.
	typ	394	106	47	24	177	591	106	128		22	98	531	433	268	
	min	388	100	43	20	173	579	98	116		16	91	512	413	248	



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