



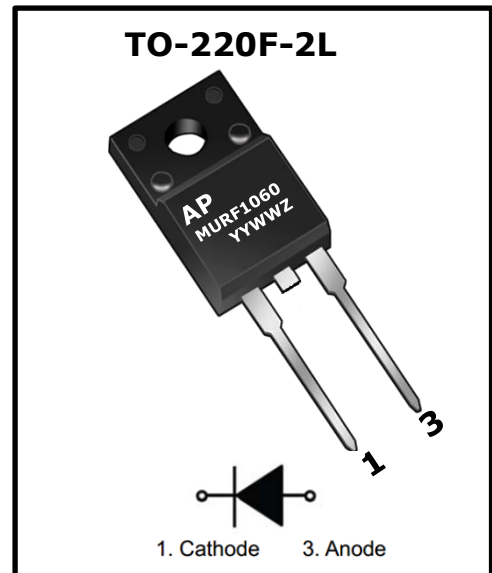
Super-fast Recovery Rectifier Diodes Reverse Voltage 200 to 600 Volts Forward Current 10A

Features

- Super-fast Rectifier diode
- High surge capability
- Low Forward Voltage Drop
- High surge current capability
- Super Fast Switching Speed For High Efficiency
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7s, per JESD 22-B106

Mechanical Data

- **Case** : Case: TO-220F-2L
- **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".
- **Weight** : 1.75gram



Maximum Ratings Characteristics

TA = 25°C unless otherwise specified

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter		Symbol	MURF1020	MURF1040	MURF1060	Unit
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	Per Leg	I _{F(AV)}	10			A
	Per Device	I _{F(AV)}	32			
Peak Forward Surge Current 8.3ms Single Half sine Wave Superimposed on Rated Load		I _{FSM}	125			A
Forward Voltage at 10A (Note 1)	T _a = 25°C	V _F	0.95	1.25	1.7	V
Maximum Reverse Recovery Time ⁽¹⁾		t _{rr}	35			ns
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _a = 25°C	I _R	10			uA
	T _a = 125°C		500			
Maximum Thermal Resistance Junction to Case		R _{θJC}	2			°C/W
Operating Junction temperature Range		T _J	-55 ~ +150			°C
Storage Temperature Range		T _{STG}	-55 ~ +150			°C

Note

- (1) Pulse Test :Pulse Width = 300uS, Duty <2.0%

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Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise specified)

Fig.1 Typical Forward Current Derating Curve

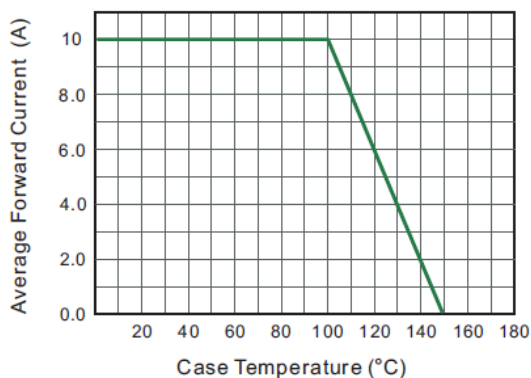


Fig.2 Typical Reverse Characteristics

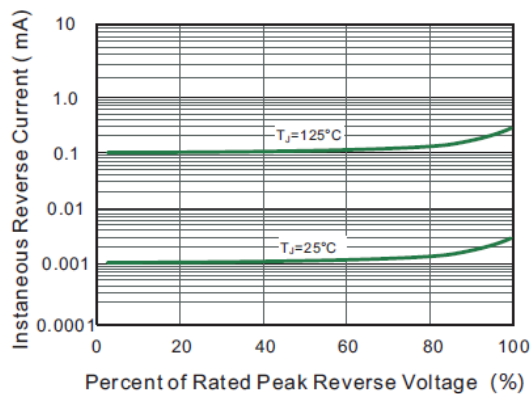


Fig.3 Typical Forward Characteristic

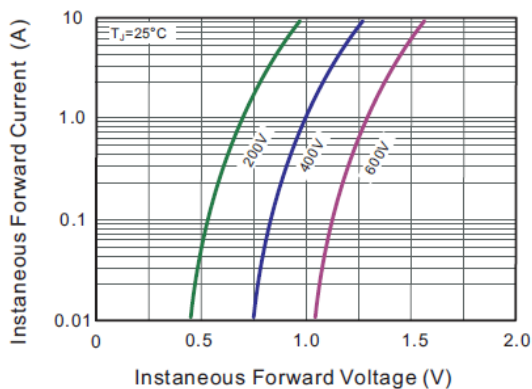


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

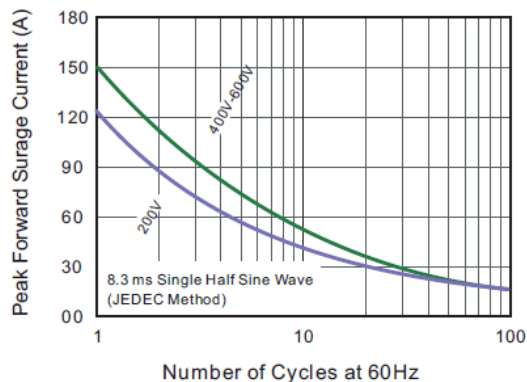
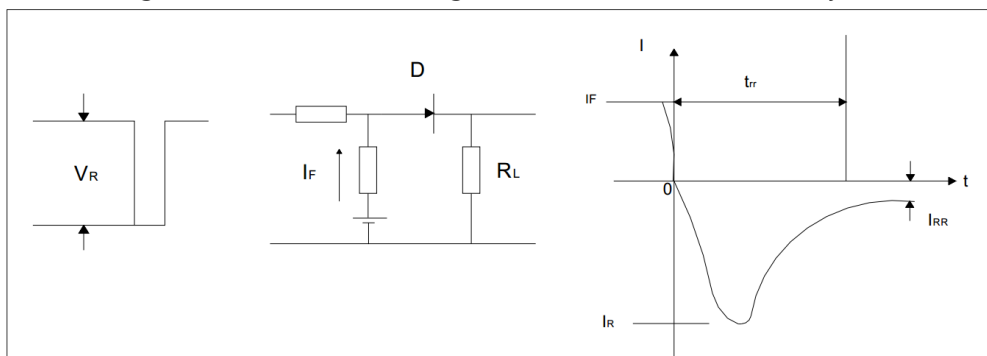


Diagram of circuit and Testing wave form of reverse recovery time





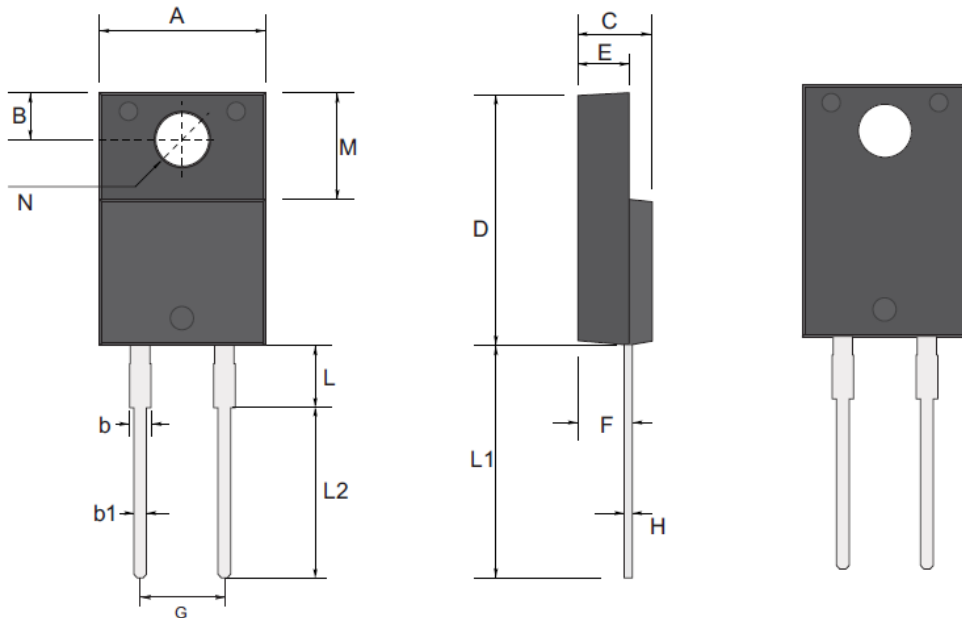
Semi

Advanced Power Semiconductor

MURF1020 THRU MURF1060

Package dimension : TO-220F-2L

Unit : mm



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	

Ordering Information

Part No	Package	Packing	Finish	Halogen	Packing Unit
MURF1020 MURF1040 MURF1060	TO-220F-2L	Tube	Sn	Free	Tube : 50ea Inner : 1000ea MOQ : 5,000ea

REV. 00



Revision History

No	Date	Contents
0	2024-12-03	Initial Brief Datasheet Release

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