



Features

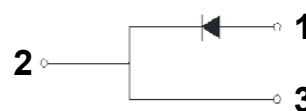
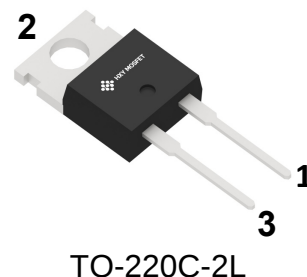
- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

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

Mechanical Data

- **Package:** TO-220C-2L
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 (Ta=25°C unless otherwise specified)

Parameter	Symbol	Limit	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Average Rectified Output Current @60Hz half sine-wave, R-load, Tc	I_o	8	A
Surge(Non-repetitive)Forward Current @60Hz half sine-wave,1 cycle, Ta=25°C	I_{FSM}	100	A
Current Squared Time @1ms≤t≤8.3ms Tj=25°C	I^2t	41	A ² s
Storage Temperature	T_{stg}	-55 ~ +150	°C
Junction Temperature	T_j	-55 ~ +150	°C

Electrical Characteristics(Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Limit	Unit
Maximum instantaneous forward voltage drop per diode	V_{FM}	$I_{FM}=8.0A$	1.5	V
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	$V_{RM}=V_{RRM}$ Ta=25°C	10	uA
	I_{RRM2}	$V_{RM}=V_{RRM}$ Ta=125°C	500	
Reverse Recovery Time	T_{rr}	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$	50	ns

Thermal Characteristics (Ta=25°C unless otherwise specified)

Parameter		Symbol	Limit	Unit
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	2.0	°C/W



Characteristics (Typical)

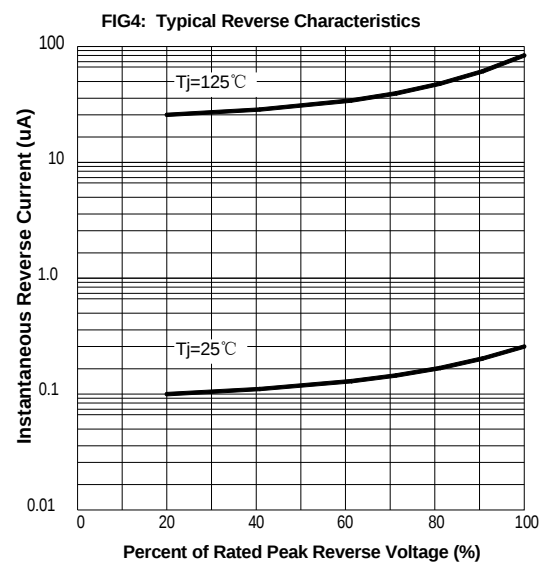
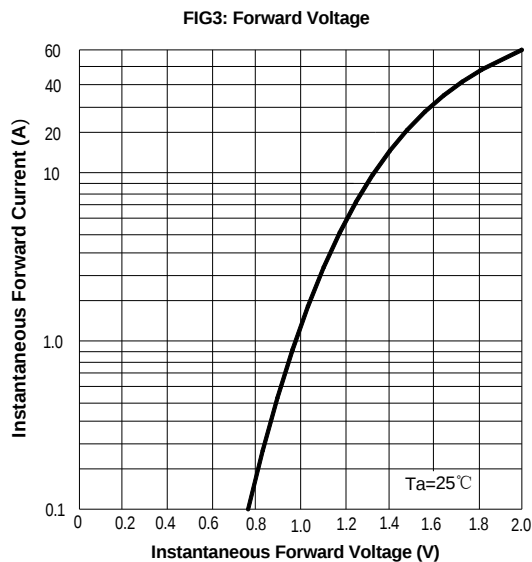
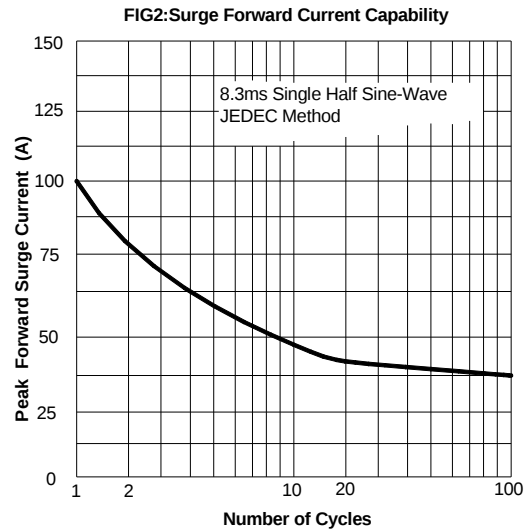
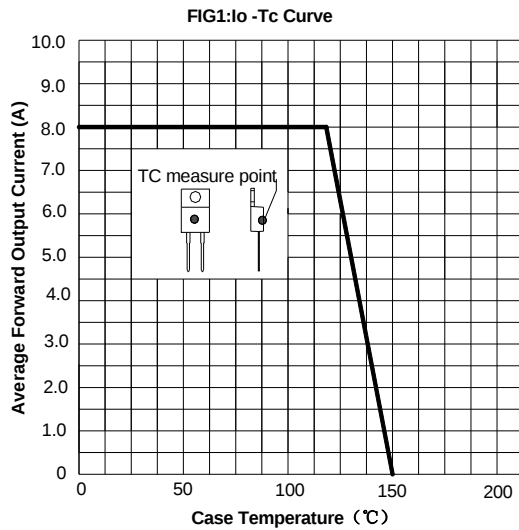
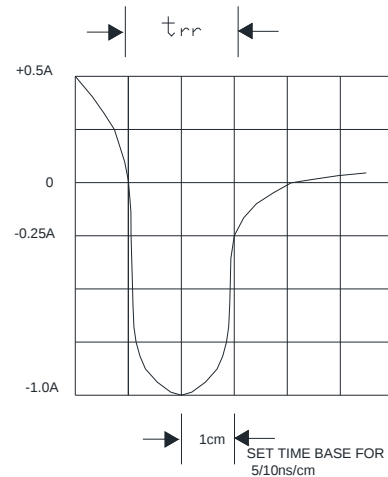
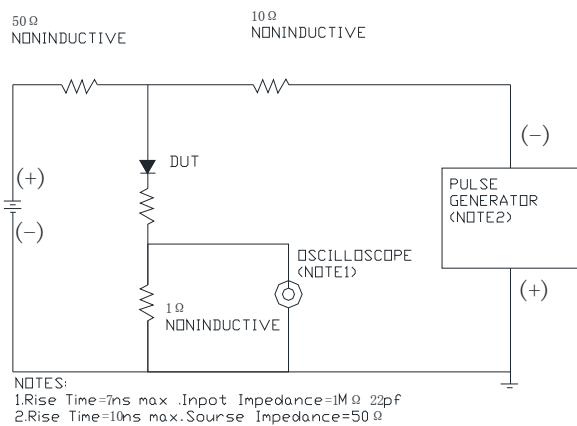
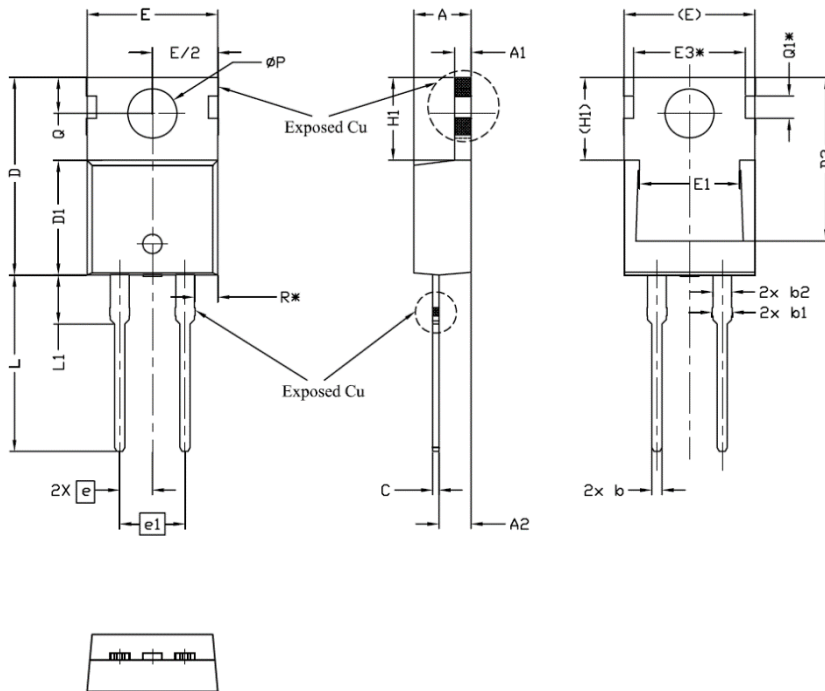


FIG.5 Diagram of circuit and Testing wave form of reverse recovery time





Package Information
TO-220C-2L



SYMBOL	DIMENSIONS			NOTES
	MIN.	NOM.	MAX.	
A	4.24	4.44	4.64	
A1	1.15	1.27	1.40	
A2	2.30	2.48	2.70	
b	0.70	0.80	0.90	
b1	1.20	1.55	1.75	
b2	1.20	1.45	1.70	
c	0.40	0.50	0.60	
D	14.70	15.37	16.00	4
D1	8.82	8.92	9.02	
D2	12.43	12.73	12.83	5
E	9.96	10.16	10.36	4,5
E1	6.86	7.77	8.89	5
E3*	8.70REF.			
e	2.54BSC			
e1	5.08BSC			
H1	6.30	6.45	6.60	5,6
L	13.47	13.72	13.97	
L1	3.60	3.80	4.00	
ϕP	3.75	3.84	3.93	
Q	2.60	2.80	3.00	
Q1*	1.73REF.			
R*	1.82REF.			



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