



High Voltage Rectifier Diode
Reverse Voltage - 1200 Volts
Forward Current - 8 Amperes

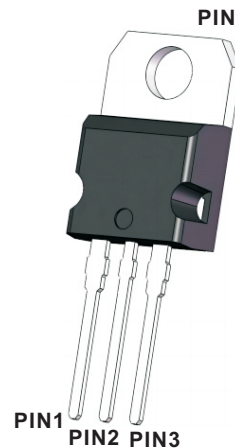
Features

- Hireliability application and automotive grade AEC-Q101 qualified
- Very low leakage current
- Very low forward voltage drop
- High voltage rectifier
- High surge current capability

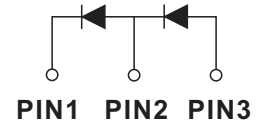
Mechanical Data

- Case: TO-220-3L
- Approx. Weight: 2.04g (0.07oz)
- 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”.

TO-220-3L



RoHS
COMPLIANT



Packing Marking And Ordering Information

Device Package	Device	Marking	Packing Type	QTY Per Tube	Inner box	Per Carton
TO-220-3L	GR8120CL	GR8120CL	Tube	50 Pcs	2,500 Pcs	5,000 Pcs

Maximum Ratings And Electrical Characteristics

Ratings At 25°C Ambient Temperature Unless Otherwise Specified

Parameter	Symbols	AT-GR8120CL	Units
Max. Repetitive Reverse Blocking Voltage	V_{RRM}	1200	V
Max. Non-repetitive Reverse Blocking Voltage	V_{RSM}	1300	V
Average Forward Current	$I_{F(AV)}$	8	A
Max Forward Voltage Drop	$I_F=8A$ $I_F=16A$	1.2 1.4	V
Max Reverse Current @ $V_R=1200V$	$T_J=25^{\circ}C$ $T_J=150^{\circ}C$	10 200	μA
Max Forward Surge Current	$t=10ms(50Hz)$ sine $t=8.3ms(60Hz)$ sine	120 130	A
Value For Fusing	$t=10ms(50Hz)$ sine $t=8.3ms(60Hz)$ sine	72 70	A^2s
Typical Thermal Resistance Junction to Case	R_{thJC}	1.5	$^{\circ}C/W$
Virtual Junction Temperature	T_{VJ}	-55 ~ +175	$^{\circ}C$
Operation Temperature	T_{OP}	-55 ~ +150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 ~ +150	$^{\circ}C$



Fig.1 Typical Forward Current Derating Curve

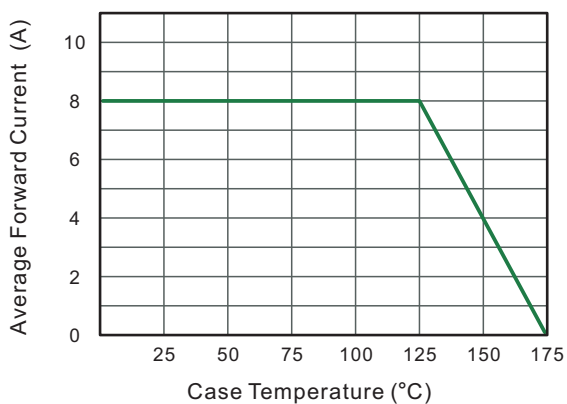


Fig.2 Typical Reverse Characteristics

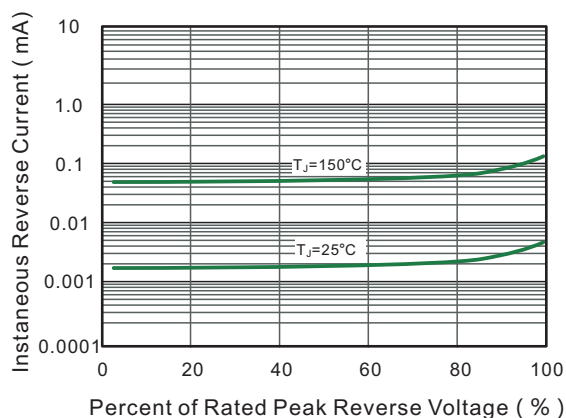


Fig.3 Typical Forward Characteristic

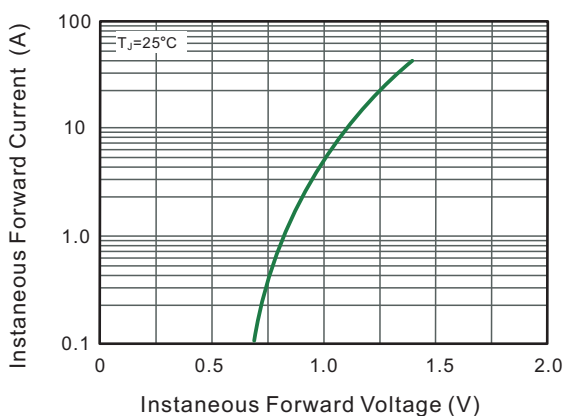
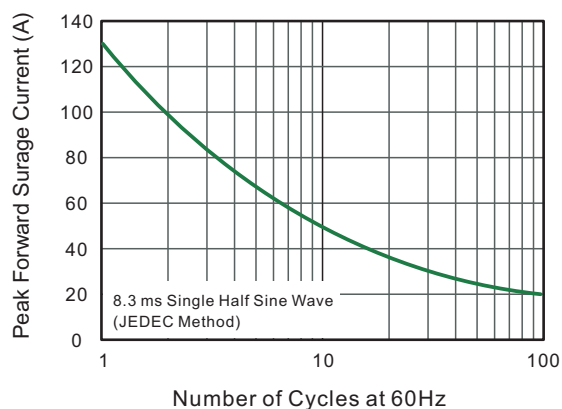


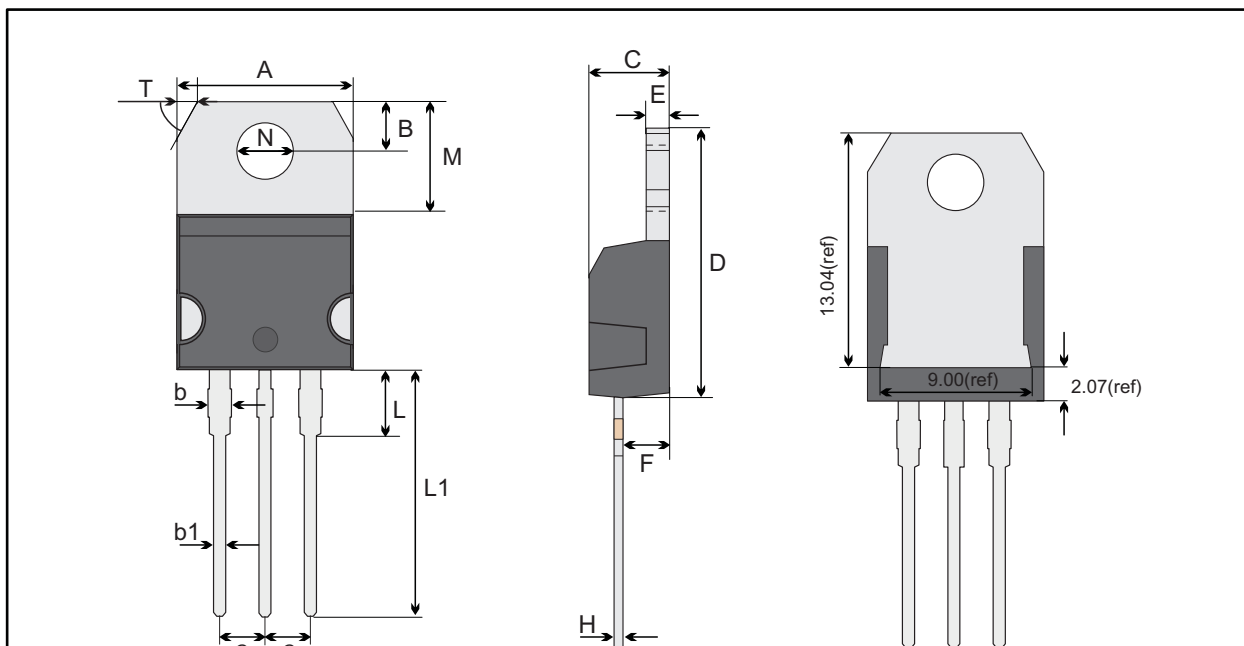
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current





Package Outline
Through Hole Package ; 3 leads

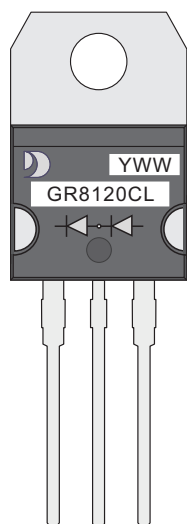
TO-220-3L



TO-220-3L mechanical data

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N	T
mm	max	10.28	2.84	1.67	0.9	4.65	15.54	1.37	2.79	2.64	0.6	3.88	13.13	6.39	3.82 typ.	1.19 58° ref.
	typ	10.18	2.74	1.47	0.8	4.45	15.34	1.27	2.59	2.54	0.5	3.68	12.93	6.19		
	min	10.08	2.64	1.27	0.7	4.25	15.14	1.17	2.39	2.44	0.4	3.48	12.73	5.99		
mil	max	405	112	66	35	183	612	54	110	104	24	153	517	252	150 typ.	47 58° ref.
	typ	401	108	58	31	175	604	50	102	100	20	145	509	244		
	min	397	104	50	28	167	596	46	94	92	16	137	501	236		

Marking Diagram



YWW: Date Code
Y:Years(0~9)
WW:Week
GR8120CL: Product name
(NOTE:The weekly code is based on the actual number of weeks in the calendar year.)



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