



Series Sensitive Gate SCRs

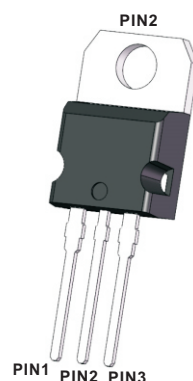
Description

The SCR series provide high dv/dt rate with strong resistance to electromagnetic interface. They are especially recommended for use on straight hair, igniter etc.

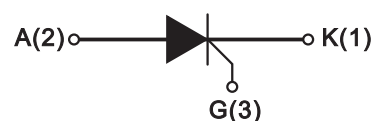
Mechanical data

- Case: TO-220-3L
- Approx. Weight: 2.04g (0.07oz)
- Lead free finish, RoHS compliant
- Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".

TO-220-3L(Suffix:C)



Application Circuit



■ Absolute Maximum Ratings (Operating temperature range applies unless otherwise specified)

Parameter	Symbols	Ratings	Unit
Repetitive peak off-state voltage	V _{DRM}	600	V
Repetitive peak reverse voltage	V _{RPM}	600	V
RMS on-state current	I _{T(RMS)}	4	A
Non repetitive surge peak on-state current (tp=10ms)	I _{TSM}	30	A
I ² t value for fusing (tp=10ms)	I ² T	4.5	A ² S
Critical rate of rise of on-state current	di/dt	50	A/us
Peak gate current (tp=20μs, T _j =125°C)	I _{GM}	1.2	A
Peak gate power (tp=20μs, T _j =125°C)	P _{GM}	2	W
Average gate power dissipation(T _j =125°C)	P _{G(AV)}	0.2	W
Operating junction temperature range	T _J	-40 to +125	°C
Storage junction temperature range	T _{STG}	-40 to +150	°C

NOTE 1: When we parallel connect a ≤1KΩ resistor between Gate and Cathode, the T_J can reach 125°C; if without this resistor, the T_J only can reach 110°C.



■ Electrical Characteristics (T_J=25°C Unless Otherwise Specified)

Symbols	Test Condition	Min	Typ	Max	Unit
I _{GT}	V _D =12V R _L =33Ω		50	200	μA
V _{GT}			0.6	0.8	V
V _{GD}	V _D =V _{DRM} T _J =125°C	0.2			V
I _L	I _G =1.2 I _{GT}			6	mA
I _H	I _T =0.05A			5	mA
dV/dt	V _D =2/3 V _{DRM} T _J =125°C R _{GK} =1KΩ	10			V/μs

■ Static Characteristics

Symbols	Parameter		Value(Max)	Unit
V _{TM}	I _T =8A t _p =380μs	T _J =25°C	1.5	V
I _{DRM}	V _D =V _{DRM} V _R =V _{RRM}	T _J =25°C	5	μA
I _{RRM}		T _J =125°C	100	μA

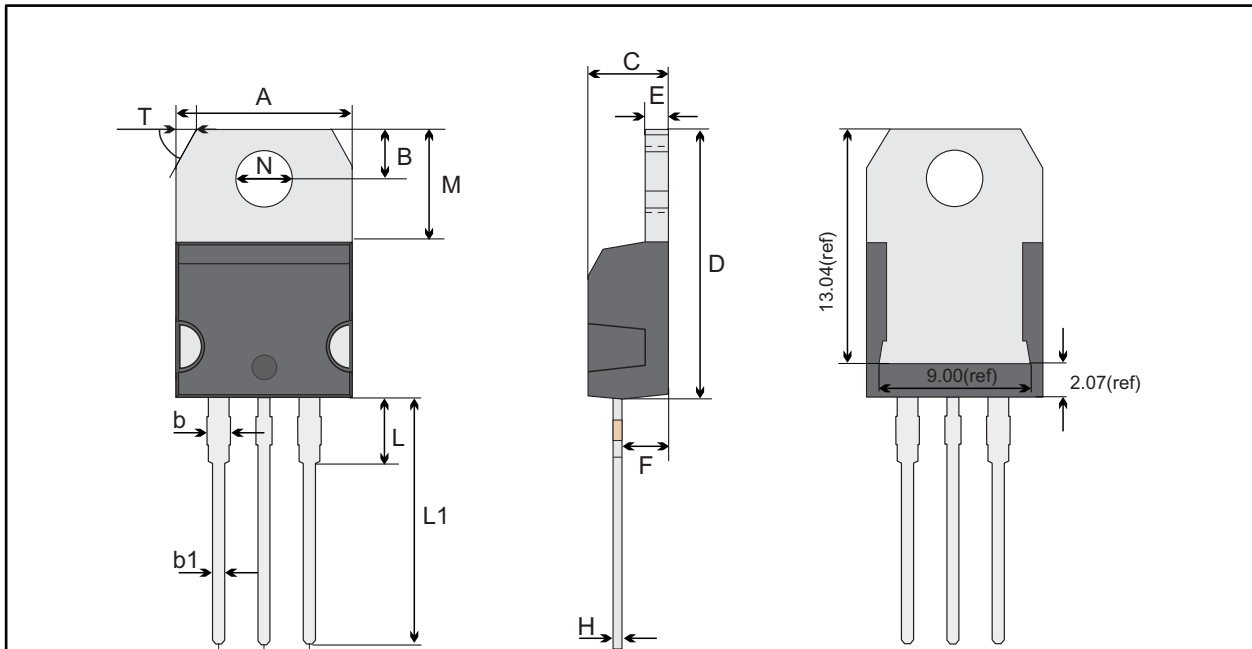
■ Thermal Resistances

Symbols	Parameter		Value(Max)	Unit
R _{th(j-c)}	junction to case	TO-220-3L	3.0	°C/W



Package Outline
Through Hole Package ; 3 leads

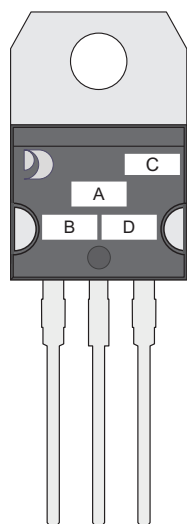
TO-220-3L



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



- Unmarkable Surfacea
- Marking Composition Field
- a: Ejector Pin Mark
- A: Marking Area
- B: Lot Code
- C: Additional Information
- D: Date Code (YWW)
- Y: Years(0~9)
- WW: Week



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