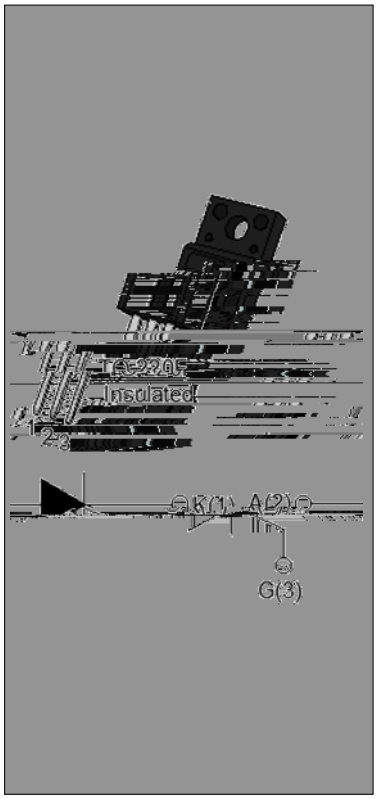
With high ability to withstand the shock loading of large current, JCT812F of silicon controlled rectifiers provides high dV/dt rate with strong resistance to electromagnetic interference. It is especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. From all three terminals to external heatsink,JCT812F provides a rated insulation voltage of 2000 $V_{RMS,}$ complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant.



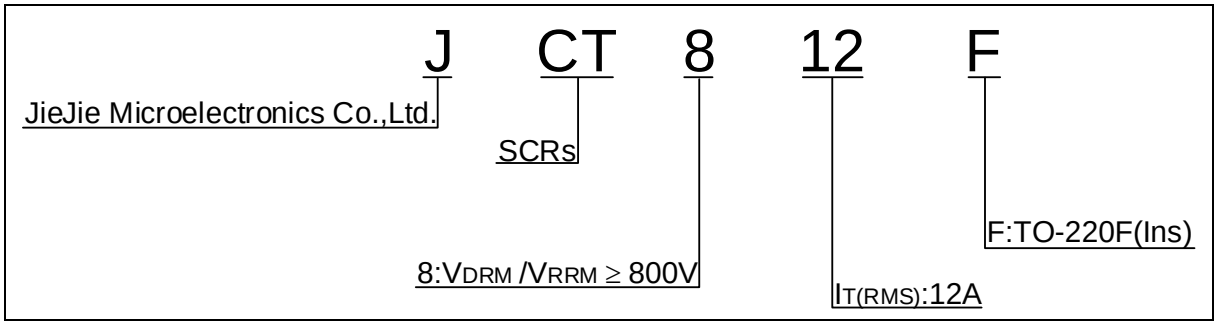
Symbol	Value	Unit
$I_{T(RMS)}$	12	A
V_{DRM}/V_{RRM}	800	V
I_{GT}	≤15	mA

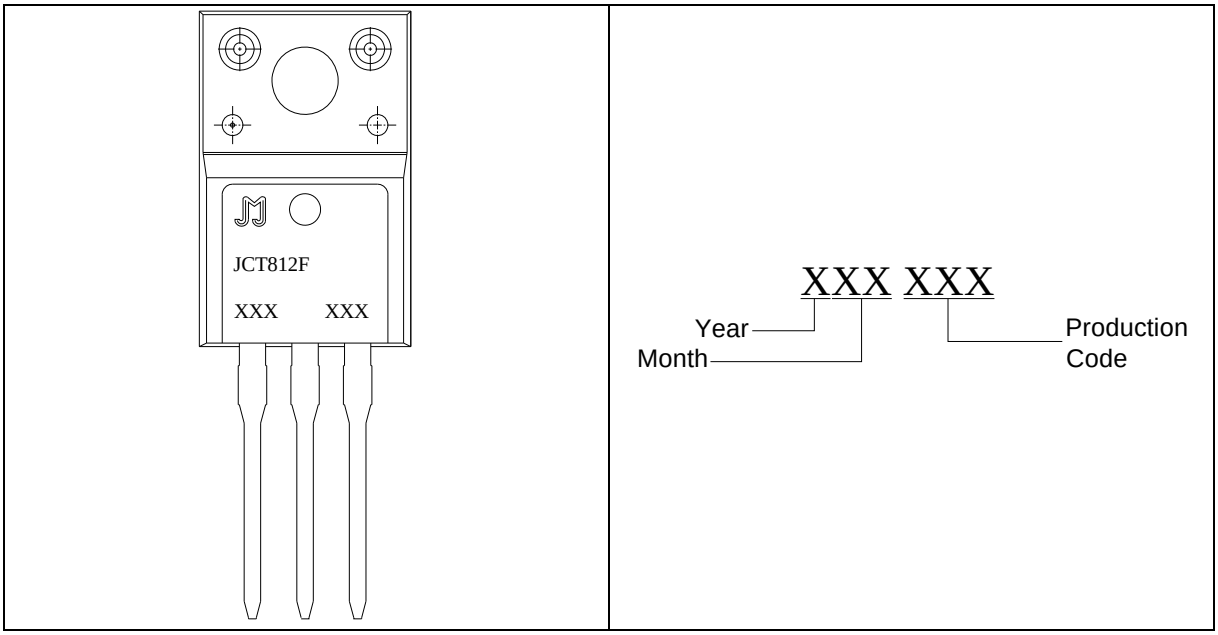
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-125	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	800	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	800	V
Average on-state current (T_C ≤ 86)	$I_{T(AV)}$	7.6	A
RMS on-state current (T_C ≤ 86)	$I_{T(RMS)}$	12	A
Non repetitive surge peak on-state current (t_p=10ms, T_j=25)	I_{TSM}	140	A
Non repetitive surge peak on-state current (t_p=8.3ms, T_j=25)		154	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	98	A^2s
Critical rate of rise of on-state current (I_G=2 × I_{GT}, f=100Hz , T_j=125)	dI/dt	150	A/μs

Peak gate current (t_p=20μs , T_j=125)	I_{GM}	4	A
Average gate power dissipation (T_j=125)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	10	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	0.5	kV

(T_j=25 unless otherwise specified)

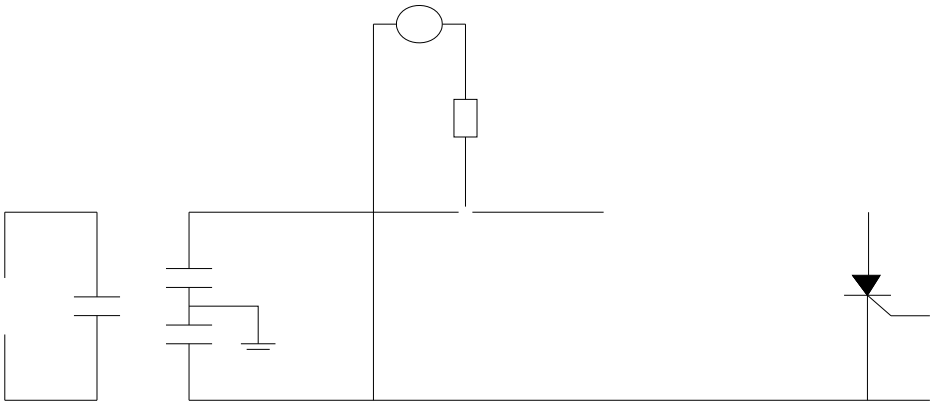
I_{GT}	V_D=12V R_L=33Ω	-	-	15	mA
V_{GT}		-	-	1	V
V_{GD}	V_D=V_{DRM} T_j=125 R_L=3.3kΩ	0.2	-	-	V
I_L	I_G=1.2I_{GT}	-	-	60	mA
I_H	I_T=500mA	-	-	50	mA
dV/dt	V_D=540V Gate Open T_j=125	500	-	-	V/μs
t_{on}	I_G=20mA I_A=200mA I_R=20mA T_j=125	-	5	-	μs


J
CT
8
12
F
JieJie Microelectronics Co.,Ltd.
SCRs
F:TO-220F(Ins)
8:VDRM /VRRM ≥ 800V
IT(RMS):12A


JCT812F
XXX XXX
XXX XXX
Year
Month
Production
Code

Maximum power dissipation versus
M

FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards. - d ʃ l'



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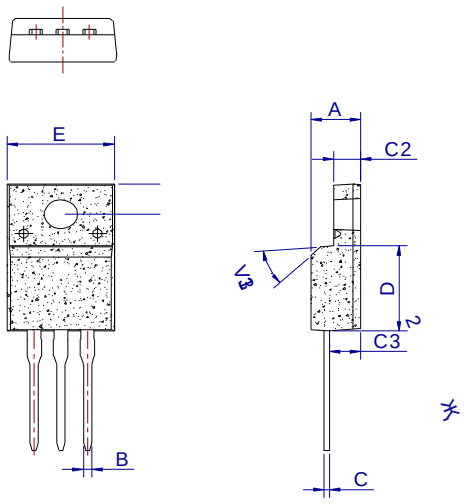
E
A
C2
V3
D
2
C3
B
C