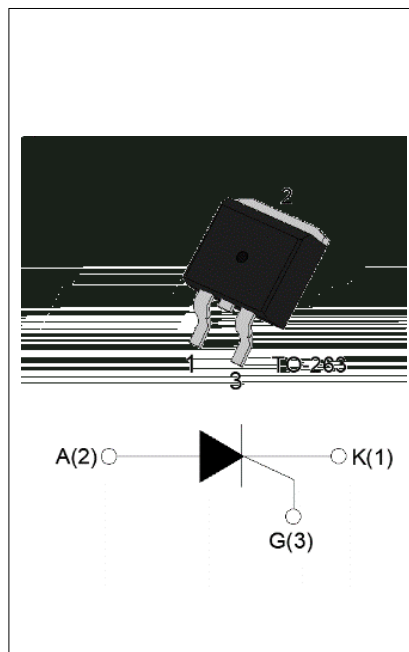




With high ability to withstand the shock loading of large current, JCT1225E SCR provides high dV/dt rate with strong resistance to electromagnetic interference. It is especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. Package TO-263 is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	25	A
V_{DRM}/V_{RRM}	1200	V
I_{GT}	40	mA

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-125	
Repetitive peak off-state voltage ($T_j=25^\circ C$)	V_{DRM}	1200	V
Repetitive peak reverse voltage ($T_j=25^\circ C$)	V_{RRM}	1200	V
Average on-state current ($T_c = 88^\circ C$)	$I_{T(AV)}$	16	A
RMS on-state current ($T_c = 88^\circ C$)	$I_{T(RMS)}$	25	A
Non repetitive surge peak on-state current ($t_p=10ms, T_j=25^\circ C$)	I_{TSM}	320	A
Non repetitive surge peak on-state current ($t_p=8.3ms, T_j=25^\circ C$)		352	
I^2t value for fusing ($t_p=10ms, T_j=25^\circ C$)	I^2t	512	A^2s
Critical rate of rise of on-state current ($I_G=2 I_{GT}, f=100Hz, T_j=125^\circ C$)	di/dt	200	$A/\mu s$
Peak gate current ($t_p=20\mu s, T_j=125^\circ C$)	I_{GM}	5	A
Average gate power dissipation ($T_j=125^\circ C$)	$P_{G(AV)}$	1	W

Peak gate power	P_{GM}	20	W
Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.8)	V_{pp}	1	kV

($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	$V_D=12V R_L=33$	-	-	40	mA
V_{GT}		-	-	1	V
V_{GD}	$V_D=V_{DRM} T_j=125 R_L=3.3K$	0.2	-	-	V
I_L	$I_G=1.2I_{GT}$	-	-	90	mA
I_H	$I_T=500mA$	-	-	80	mA
dV/dt	$V_D=800V$ Gate Open $T_j=125$	1000	-	-	V/ μs
t_{on}	$I_G=50mA I_A=500mA I_R=50mA$ $T_j=25$	-	5	-	μs
t_{off}		-	70	-	

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=50A t_p=380\mu s$	$T_j=25$	1.55	V
V_{TO}	Threshold voltage	$T_j=125$	0.74	V
R_D	Dynamic resistance	$T_j=125$	19	m
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	7	μA
I_{RRM}		$T_j=125$	2	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case(DC)	1.1	/W
$R_{th(j-a)}$	junction to ambient (DC, in free air, $S=1cm^2$)	47	/W

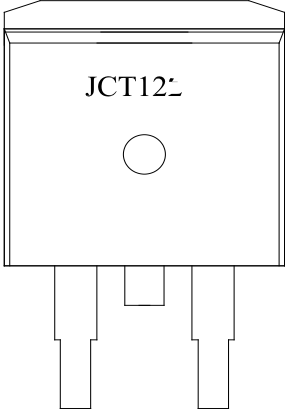
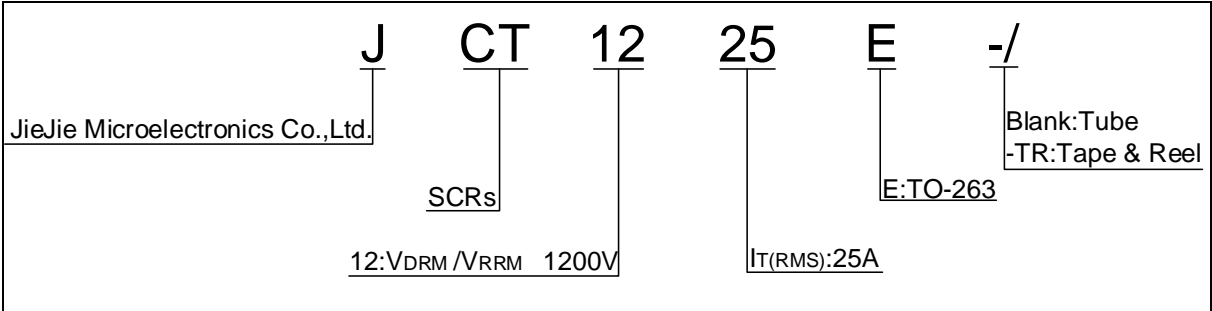


FIG.1 Maximum power dissipation versus RMS on-state current

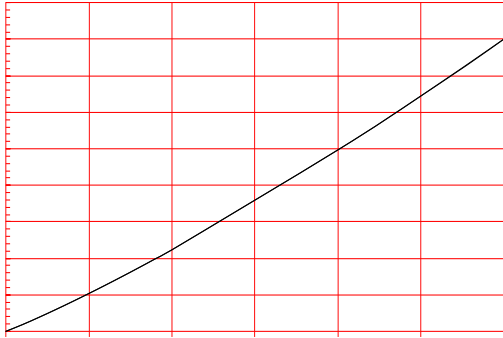


FIG.2: RMS on-state current versus case temperature

FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

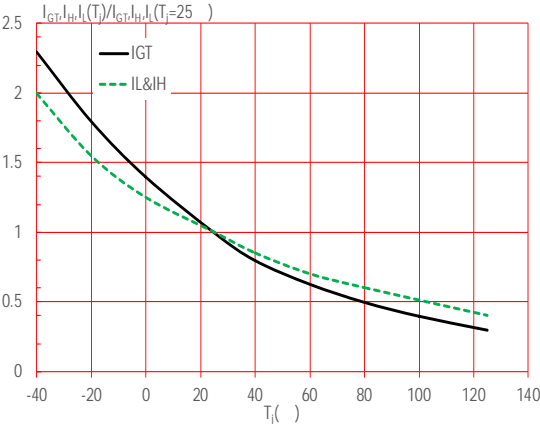
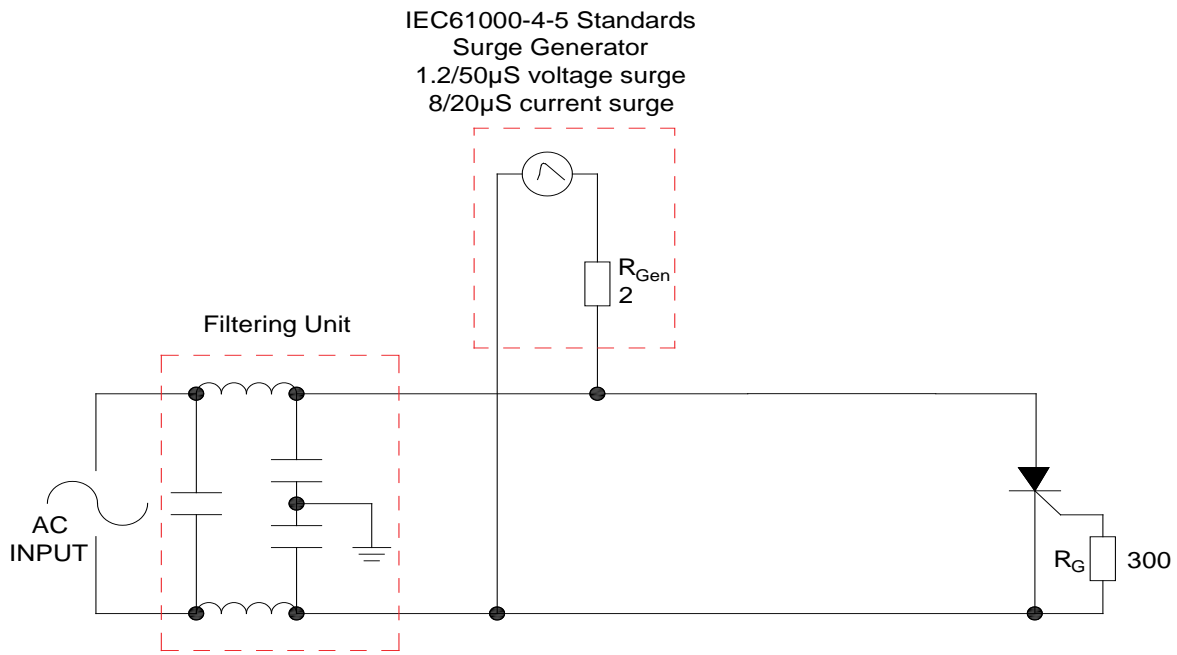
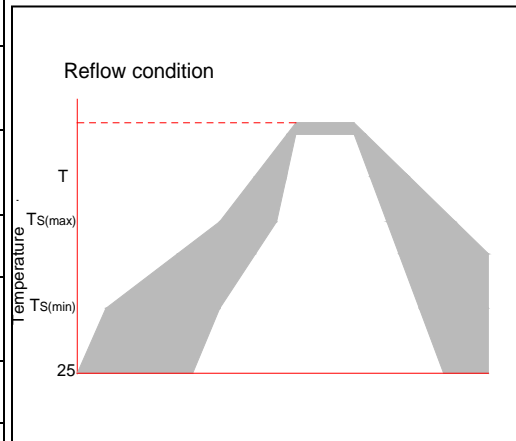


FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150
	-Temperature Max($T_{s(max)}$)	+200
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L) to peak)		3 /sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 /sec. Max
Reflow	-Temperature(T_L) (Liquidus)	+217
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)
Time within 5 of actual Peak Temp (t_p)		20-40secs.
Ramp-down Rate		6 /sec. Max
Time 25 to Peak Temp (T_p)		8 min. Max
Do not exceed		+260



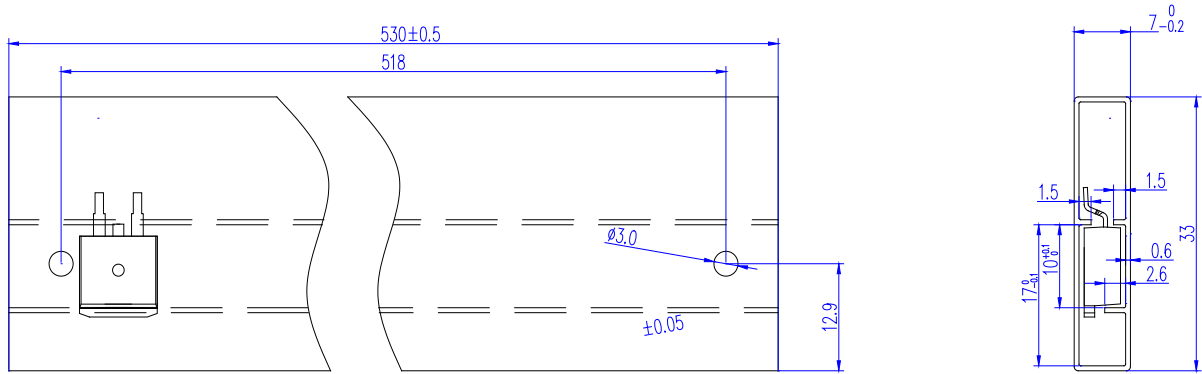
Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT1225E	1200	40	TO-263	50	Tube
JCT1225E-TR				800	Tape & Reel

Document Revision History

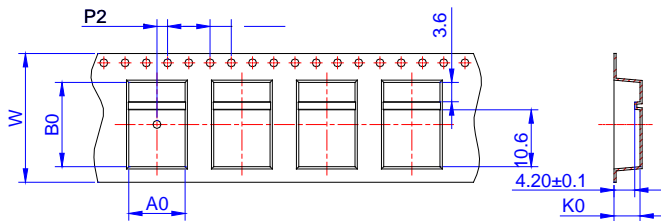
Date	Revision	Changes
Apr.13, 2023	A.1.0	Last update

Dimensions

Millimeters 09 cm /Im0 Do Q EMC3



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-263	TUBE	50	1,000	5,000



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	23.70	24.00	24.30	0.933	0.945	0.957
E	1.65	1.75	1.85	0.065	0.069	0.073
F	11.40	11.50	11.60	0.449	0.453	0.457
D0	-	1.50	1.60	-	0.059	0.063
D1	-	1.50	1.60	-	0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	15.90	16.00	16.10	0.626	0.630	0.634
P2	1.90	2.00	2.10	0.075	0.079	0.083
A0	10.80	10.90	11.00	0.425	0.429	0.433
B0	16.20	16.30	16.40	0.638	0.642	0.646
K0	4.80	4.90	5.00	0.189	0.193	0.197
t	0.35	0.40	0.45	0.014	0.016	0.018

Information furnished in this document is believed to be accurate and reliable.
However, Jiangsu JieJie Microelectronics Co., Ltd. assumes no responsibility for the