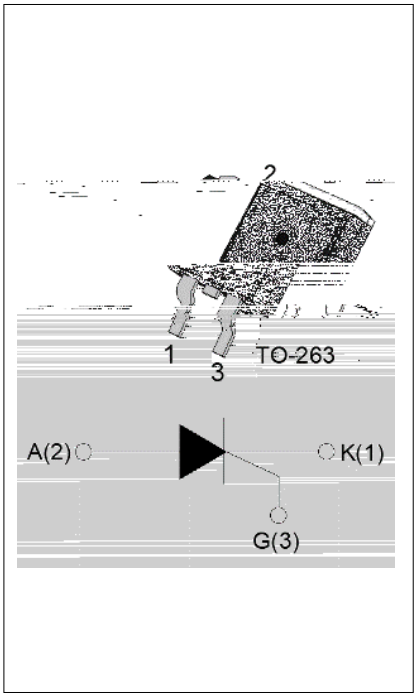
JCT151E-650RH 12A SCR Rev.A.1.1

DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT151E-650RH 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. Package TO-263 is RoHS compliant.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	12	A
V_{DRM}/V_{RRM}	650	V
I_{GT}	15	mA

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-150	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	650	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	650	V
Average on-state current ($T_C \leq$ 128)	$I_{T(AV)}$	7.5	A
RMS on-state current ($T_C \leq$ 128)	$I_{T(RMS)}$	12	A
Non repetitive surge peak on-state current (t_p=10ms, T_j=25)	I_{TSM}	120	A
Non repetitive surge peak on-state current (t_p=8.3ms, T_j=25)		132	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	72	A^2s
Critical rate of rise of on-state current (I_G=2× I_{GT}, f=100Hz , T_j=150)	dI/dt	100	A s
Peak gate current (t_p=20 s , T_j=150)	I_{GM}	4	A

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ORDERING INFORMATION

J CT 151 E -650

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

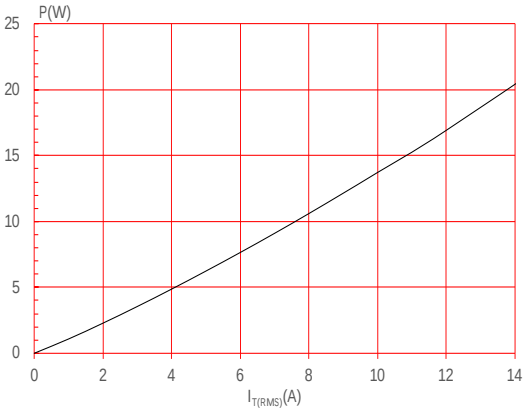


FIG.2: RMS on-state current versus case temperature

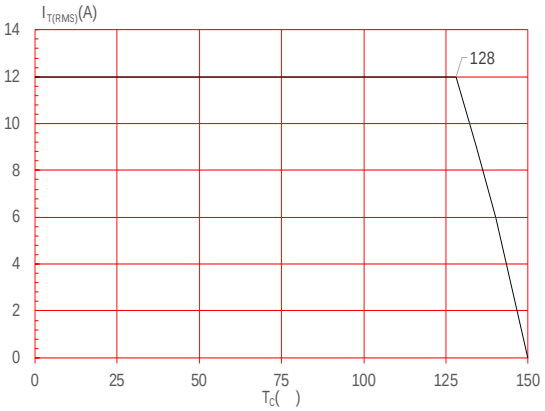


FIG.3: RMS on-state current versus ambient temperature (printed circuit board FR4,copper

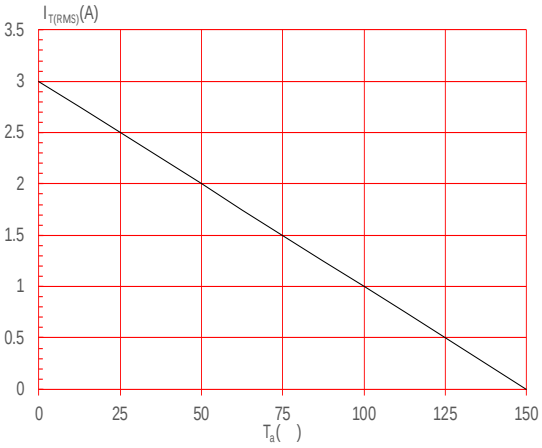


FIG.4: Surge peak on-state current versus number of cycles

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

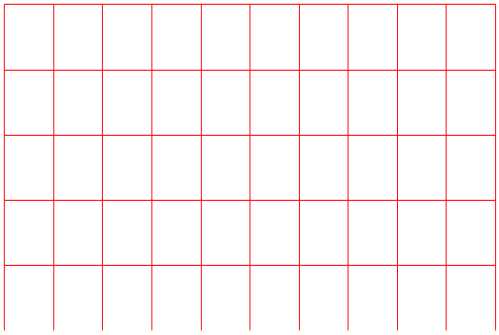
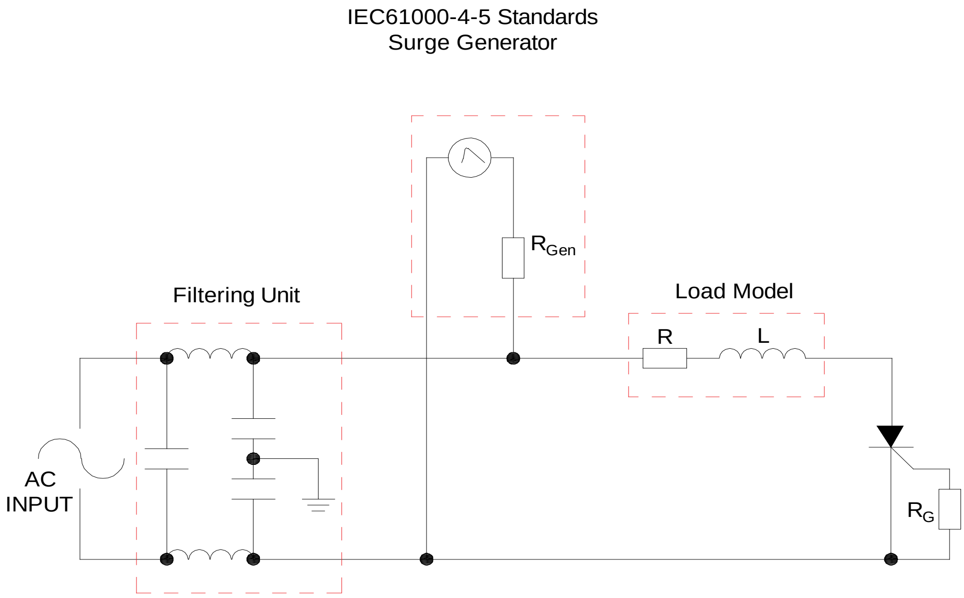


FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



SOLDERING PARAMETERS

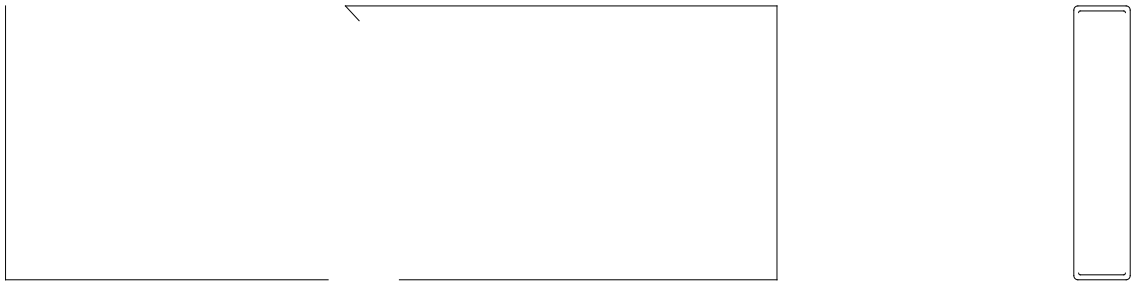
Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150
	-Temperature Max($T_{s(max)}$)	+200
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L)to peak)		3 /sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 /sec. Max
Reflow	-Temperature(T_L) (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

SCN (m)4. Mo2Pide8256 mt23Pe7ak9Temp9(TP)S Q 8im

ORDERING INFO

Order code	

DELIVERY MODE



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