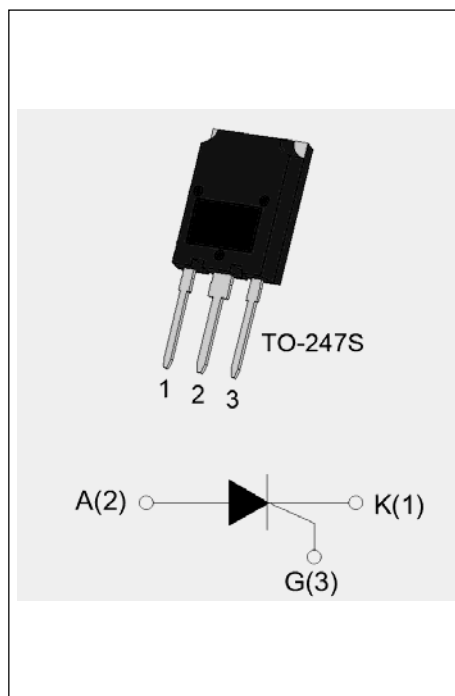




DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT1275CS SCR provides high dV/dt rate with strong resistance to electromagnetic interference. It is especially recommended for use on solid state relay, UPS, SVC, power charger, T-tools etc. Package TO-247S is RoHS compliant.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	75	A
V_{DRM}/V_{RRM}	1200	V
I_{GT}	10-80	mA

ABSOLUTE MAXIMUM RATINGS

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 ($T_c = 78^\circ C$)	$I_{T(AV)}$	49	A
RMS on-state current ($T_c = 78^\circ C$)	$I_{T(RMS)}$	75	A
Non repetitive surge peak on-state current ($t_p=10ms, T_j=25^\circ C$)	I_{TSM}	800	A
Non repetitive surge peak on-state current ($t_p=8.3ms, T_j=25^\circ C$)		880	
I^2t value for fusing ($t_p=10ms, T_j=25^\circ C$)	I^2t	3200	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}, f=100Hz, T_j=125^\circ C$)	di/dt	200	$A/\mu s$
Peak gate current ($t_p=20\mu s, T_j=125^\circ C$)	I_{GM}	12	A

Average gate power dissipation ($T_j=125$)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	22	W
Peak pulse voltage ($T_j=25$; non-repetitive,off-state;FIG.7)	V_{pp}	1	kV

ELECTRICAL CHARACTERISTICS ($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	$V_D=12V R_L=33$	10	-	80	mA
V_{GT}		-	-	1.3	V
V_{GD}	$V_D=V_{DRM} T_j=125 R_L=3.3K$	0.2	-	-	V
I_L	$I_G=1.2I_{GT}$	-	-	200	mA
I_H	$I_T=500mA$	-	-	150	mA
dV/dt	$V_D=800V$ Gate Open $T_j=125$	2000	-	-	V/ μs
t_{on}	$I_G=100mA I_A=1A I_R=100mA$ $T_j=25$	-	5	-	μs
t_{off}		-	100	-	

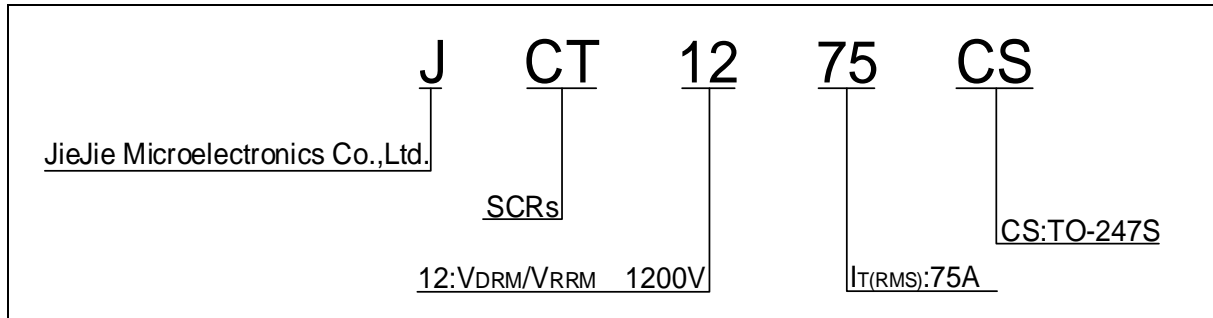
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=100A t_p=380\mu s$	$T_j=25$	1.4	V
V_{TO}	Threshold voltage	$T_j=125$	0.72	V
R_D	Dynamic resistance	$T_j=125$	7.3	m
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	10	μA
I_{RRM}		$T_j=125$	5	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (DC)	0.48	/W
$R_{th(j-a)}$	junction to ambient (DC)	48	/W

ORDERING INFORMATION



MARKING

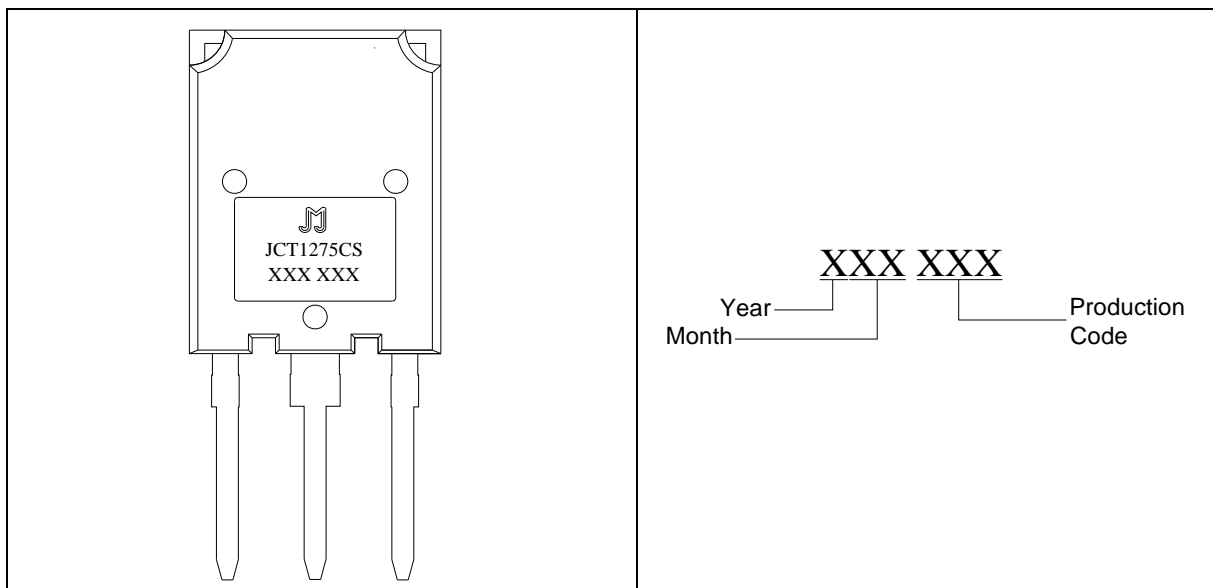


FIG.1 Maximum power dissipation versus RMS on-state current

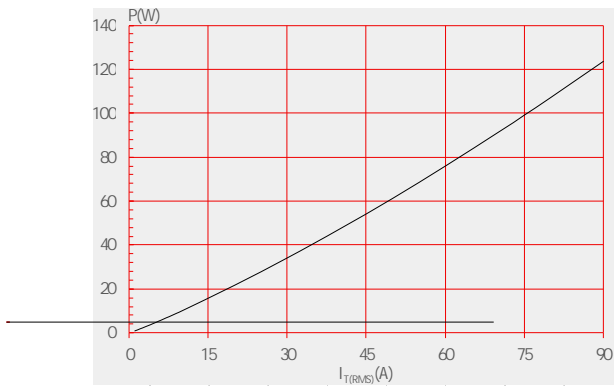


FIG.2: RMS on-state current versus case temperature

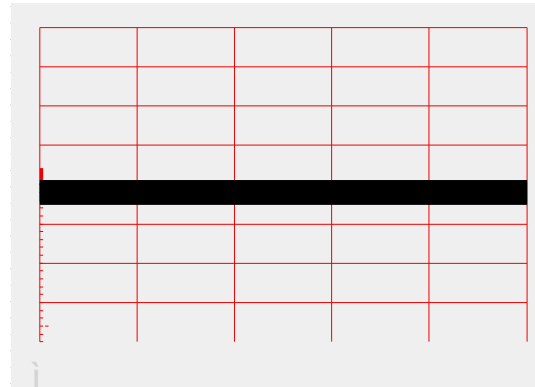
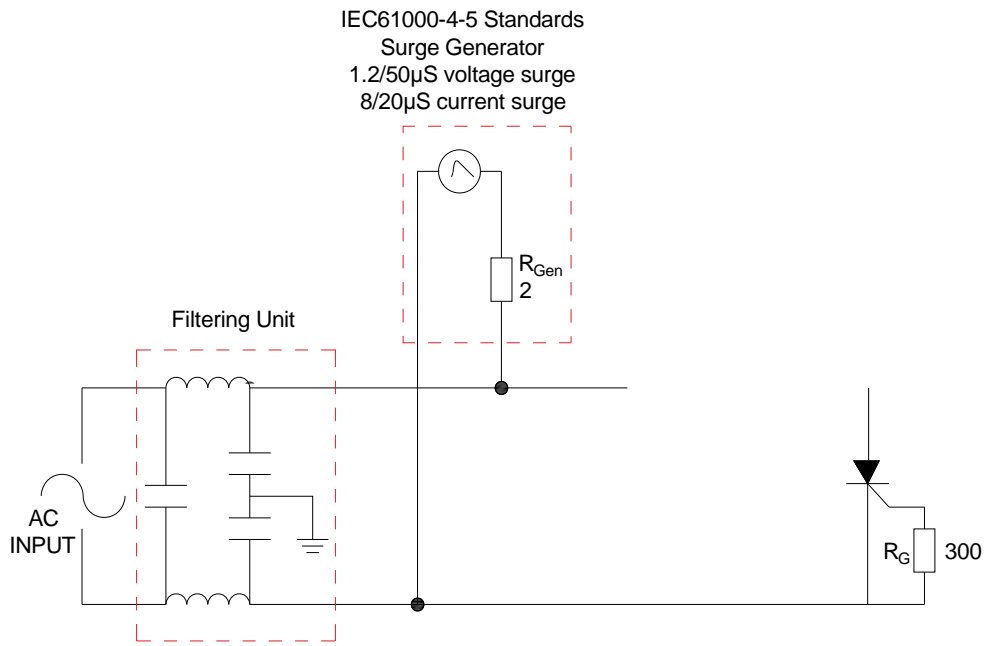


FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



**ORDERING INFORMATION**

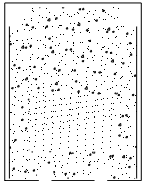
Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT1275CS	1200	10-80	TO-247S	30	Tube

Document Revision History

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



PACKAGE MECHANICAL DATA





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