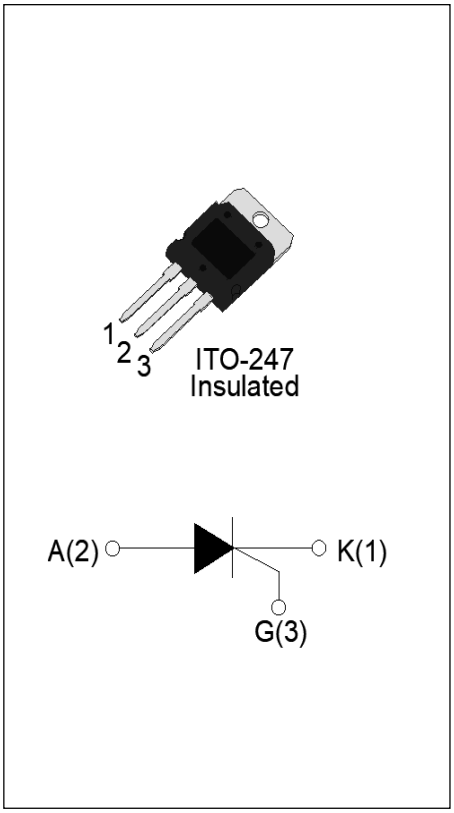
JCT1690IS 90A SCR

Rev.A.1.0

DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT1690IS 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. From all three terminals to external heatsink,JCT1690IS provides a rated insulation voltage of 2500 V_{RMS}, Package ITO-247 is RoHS compliant.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	90	A
V_{DRM} /V_{RRM}	1600	V
I_{GT}	10-80	mA

ABSOLUTE MAXIMUM RATINGS

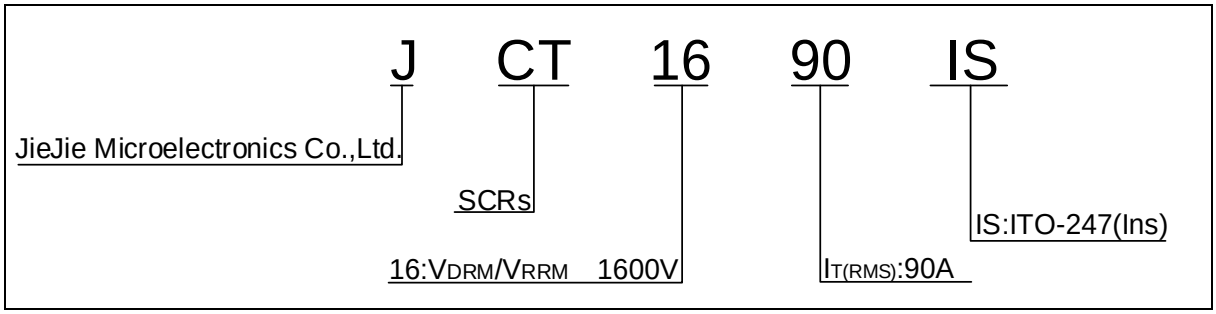
Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-125	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	1600	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	1600	V
Average on-state current (T_C 67)	$I_{T(AV)}$	57	A
RMS on-state current (T_C 67)	$I_{T(RMS)}$	90	A
Non repetitive surge peak on-state current (t_p=10ms , T_j=25)	I_{TSM}	1000	A
Non repetitive surge peak on-state current (t_p=8.3ms , T_j=25)	I_{TSM}	1100	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	5000	A^2s
Critical rate of rise of on-state current (I_G=2 I_{GT} , f=100Hz , T_j=125)	dI/dt	200	A/μs

Peak gate current (t_p=20μs , T_j=125)	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}	1.1	kV

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	V_D=12V R_L=33Ω	10	-	80	mA
V_{GT}		-	-	1.3	V
V_{GD}					

ORDERING INFORMATION



MARKING

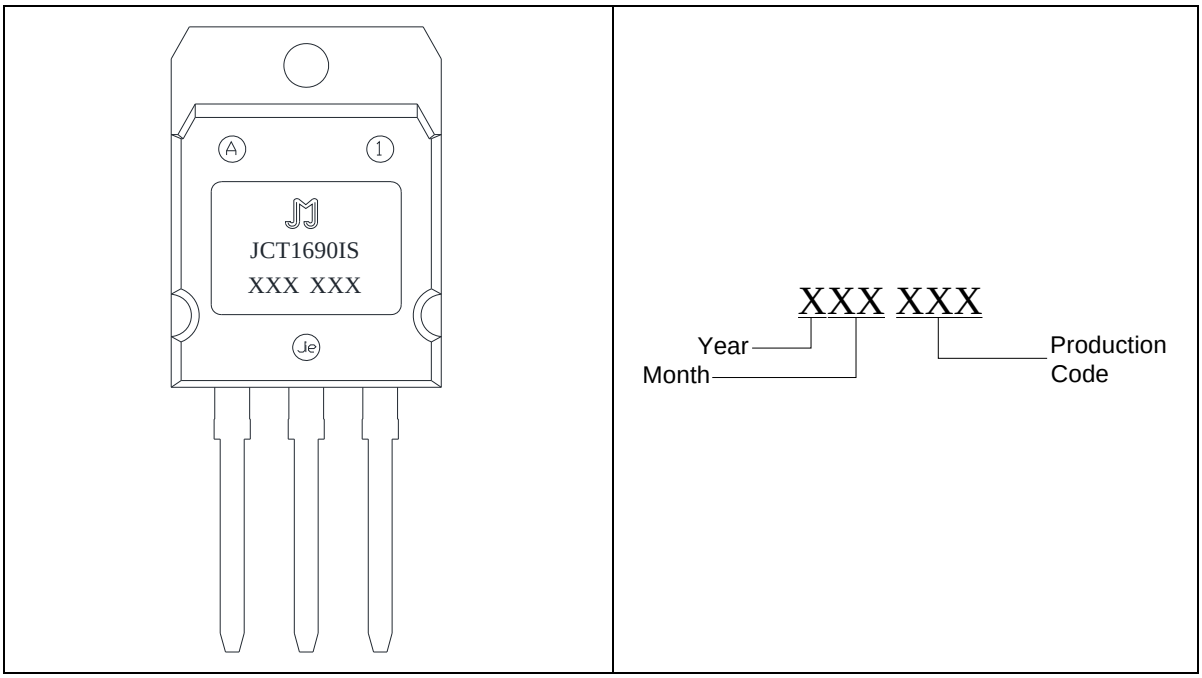


FIG.1 Maximum power dissipation versus RMS on-state current

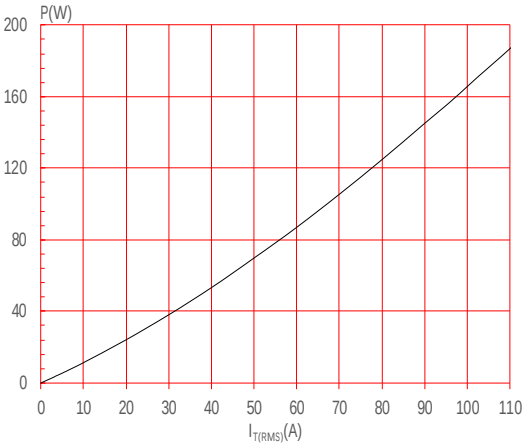


FIG.2: RMS on-state current versus case temperature

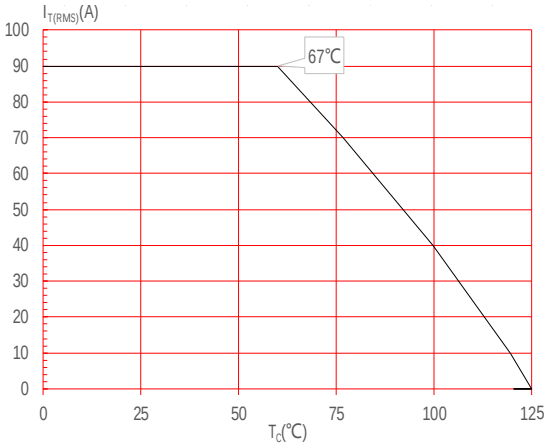


FIG.3: Surge peak on-state current versus number of cycles

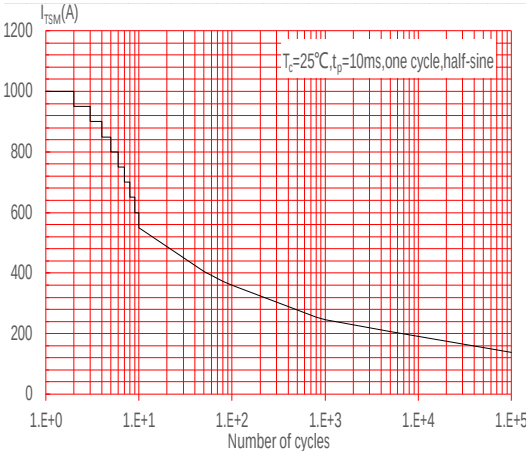


FIG.4: On-state characteristics

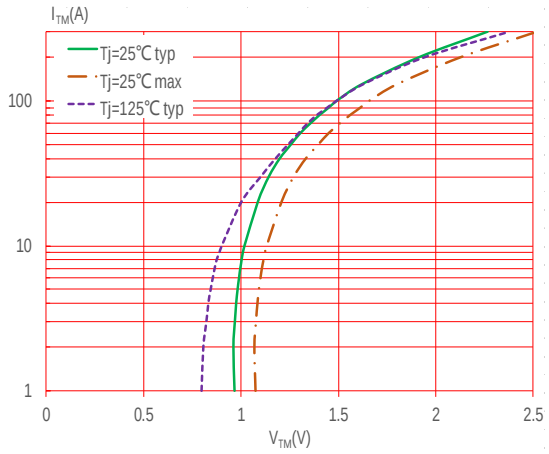


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width t_p<10ms, and corresponding value of I^2t (dI/dt<200A/μs)

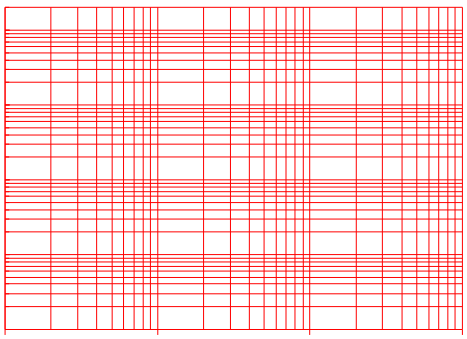
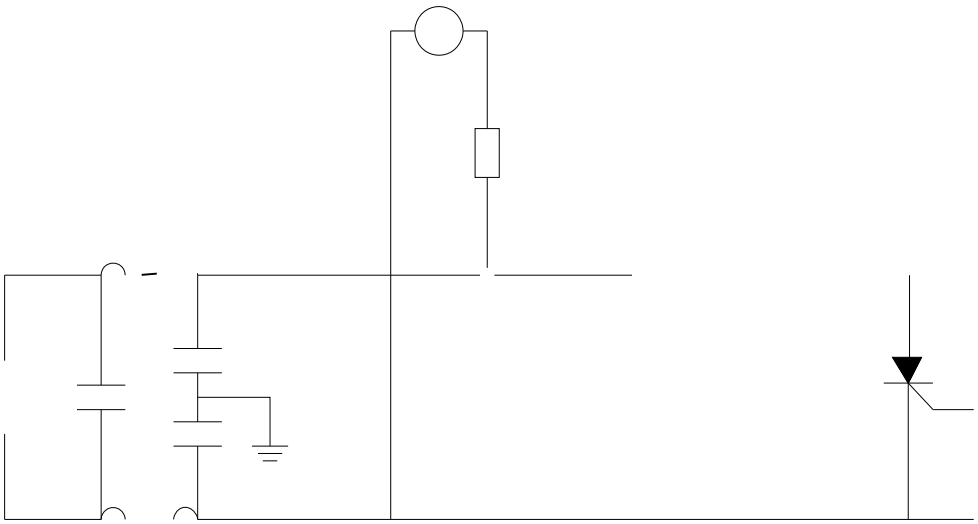


FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT1690IS	1600	10-80	ITO-247(Ins)	25	Tube

Document Revision History

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

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