

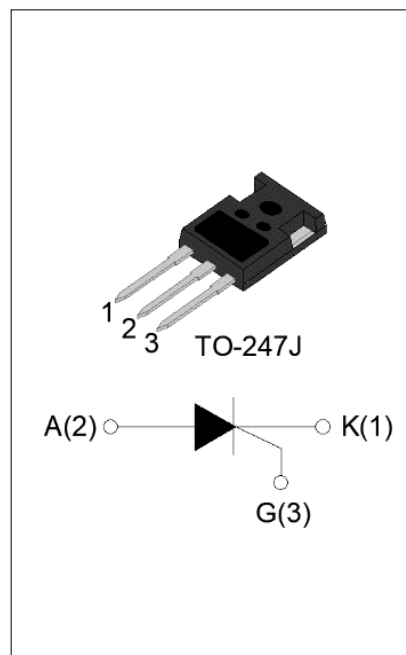


DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT855SJ 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-247J is RoHS compliant.

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	55	A
V_{DRM}/V_{RRM}	800	V
I_{GT}	10-50	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 ($T_j=25^\circ\text{C}$)	V_{DRM}	800	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	800	V
Average on-state current ($T_c=87^\circ\text{C}$)	$I_{T(AV)}$	35	A
RMS on-state current ($T_c=87^\circ\text{C}$)	$I_{T(RMS)}$	55	A
Non repetitive surge peak on-state current ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	700	A
Non repetitive surge peak on-state current ($t_p=8.3\text{ms}$, $T_j=25^\circ\text{C}$)		750	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	2450	A^2s
Critical rate of rise of on-state current ($I_G=2 I_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$)	di/dt	200	A/s
Peak gate current ($t_p=20\text{ }\mu\text{s}$, $T_j=125^\circ\text{C}$)	I_{GM}	10	A
Average gate power dissipation ($T_j=125^\circ\text{C}$)	$P_{G(AV)}$	1	W

Peak gate power	P_{GM}	20	W
Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.7)	V_{pp}	0.7	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	-	50	mA
V_{GT}		-	-	1	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3K$	0.2	-	-	V
I_L	$I_G=1.2I_{GT}$	-	-	120	mA
I_H	$I_T=500mA$	-	-	100	mA
dV/dt	$V_D=540V$ Gate Open $T_j=125$	1500	-	-	V s
t_{on}	$I_G=50mA$ $I_A=500mA$ $I_R=50mA$ $T_j=25$	-	4	-	s
t_{off}		-	130	-	

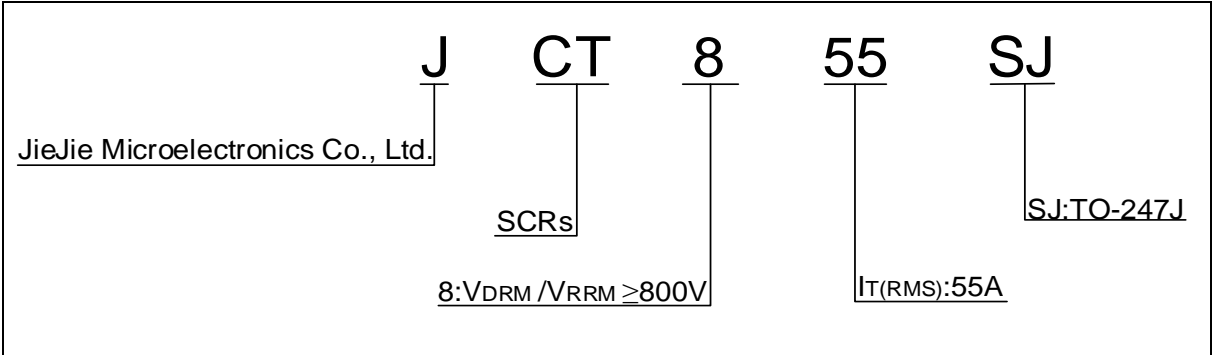
STATIC CHARACTERISTICS

Symbol	Parameter	Value(MAX.)	Unit	
V_{TM}	$I_{TM}=80A$ $t_p=380$ s	$T_j=25$	1.5	V
V_{TO}	Threshold voltage	$T_j=125$	0.76	V
R_D	Dynamic resistance	$T_j=125$	8.5	
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25$	9	A
I_{RRM}		$T_j=125$	5	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case(DC)	0.5	/W
$R_{th(j-a)}$	junction to ambient (DC)	50	/W

ORDERING INFORMATION



MARKING

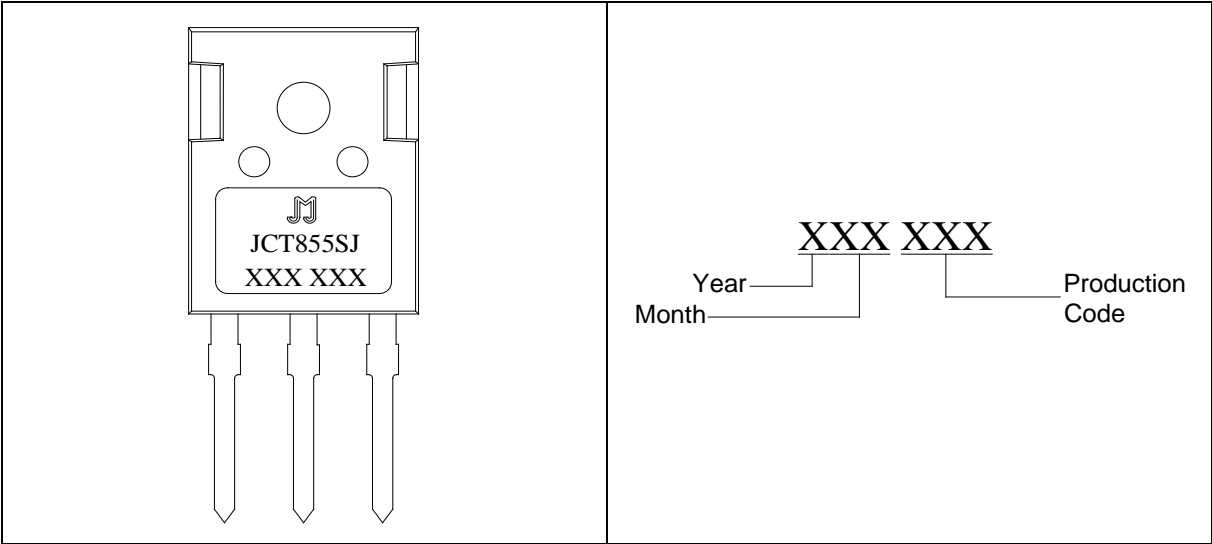


FIG.1 Maximum power dissipation versus RMS on-state current

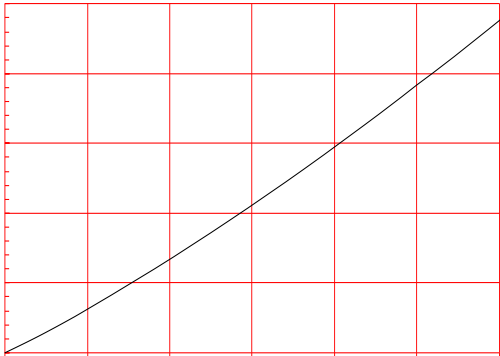


FIG.2: RMS on-state current versus case temperature

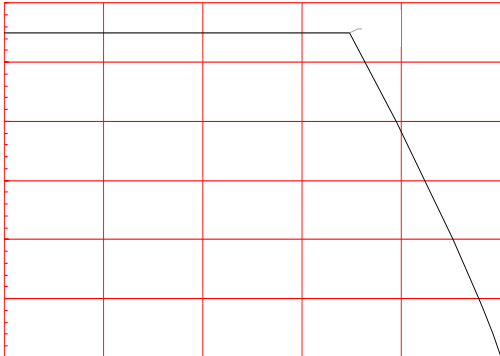
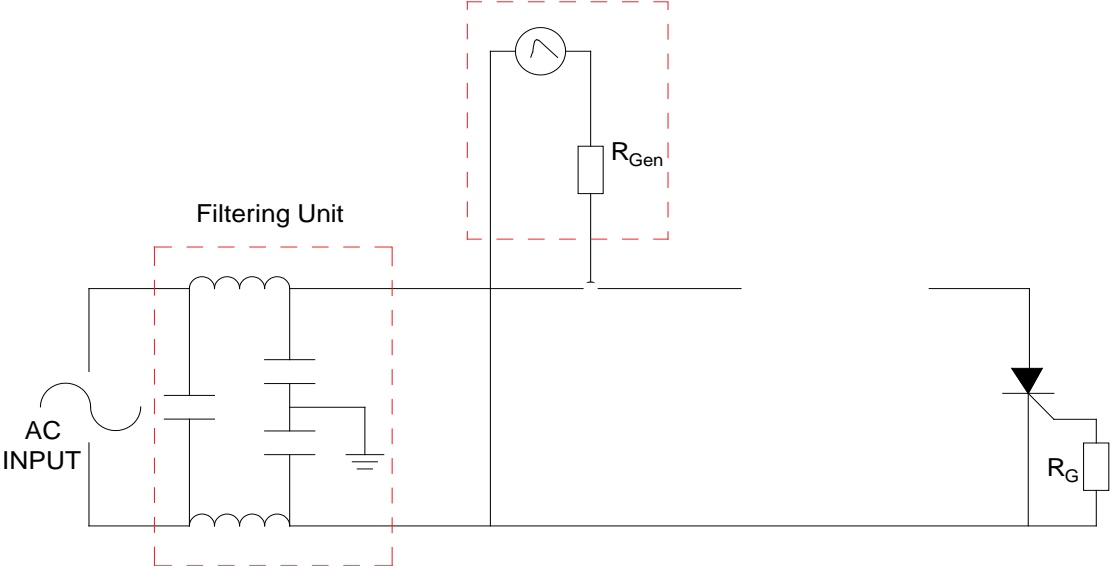


FIG.3: Surge peak on-state current versus number of cycles

FIG.4: On-state characteristics

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

IEC61000-4-5 Standards
Surge Generator



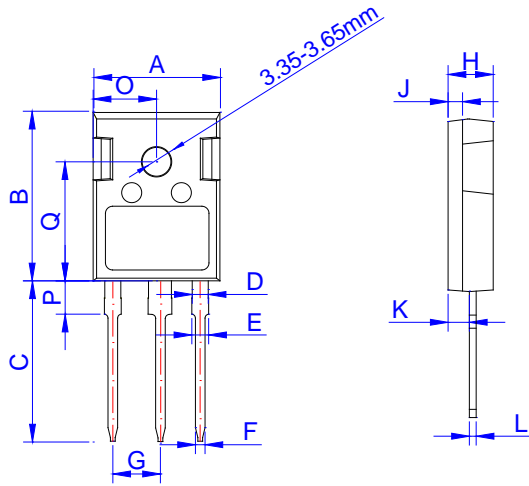
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT855SJ	800	10-50	TO-247J	30	Tube

Document Revision History

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

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.50	15.80	16.10	0.610	0.622	0.634
B	20.80	21.00	21.20	0.819	0.827	0.835
C	19.70	20.00	20.30	0.776	0.787	0.799
D	1.80	2.00	2.20	0.071	0.079	0.087
E	1.90	2.10	2.30	0.075	0.083	0.091
F	1.00	1.20	1.40	0.039	0.047	0.055
G		5.44			0.214	
H	4.80	5.00	5.20	0.189	0.197	0.205
J	1.90	2.00	2.10	0.075	0.079	0.083
K	2.20	2.35	2.50	0.087	0.093	0.098
L	0.41	0.60	0.79	0.016	0.024	0.031
O		7.90			0.312	
P	4.05	4.15	4.25	0.016	0.024	0.031
Q		14.85			0.587	

DELIVERY MODE

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