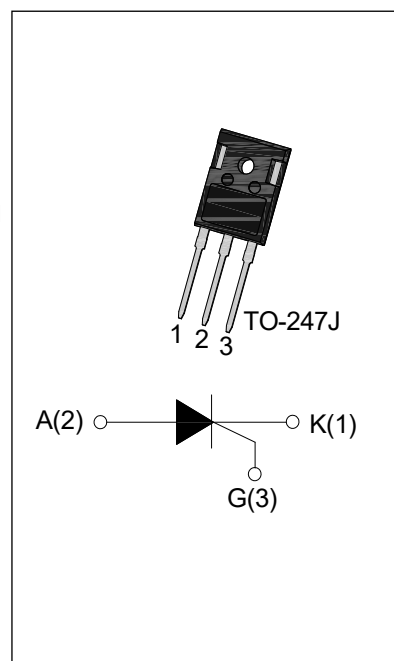




### DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT1275SJ SCRs provide high dv/dt rate with high frequency noise immunity. Products are especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. Package TO-247J is RoHS compliant. (2011/65/EU)



### 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	°C
Operating junction temperature range		$T_j$	-40-125	°C
Repetitive peak off-state voltage( $T_j=25^\circ\text{C}$ )		$V_{DRM}$	1200	V
Repetitive peak reverse voltage( $T_j=25^\circ\text{C}$ )		$V_{RRM}$	1200	V
Non repetitive surge peak Off-state voltage		$V_{DSM}$	$V_{DRM} + 100$	V
Non repetitive peak reverse voltage		$V_{RSM}$	$V_{RRM} + 100$	V
RMS on-state current	TO-247J ( $T_c=70^\circ\text{C}$ )	$I_{T(RMS)}$	75	A
Non repetitive surge peak on-state current ( $t_p=10\text{ms}$ )		$I_{TSM}$	800	A
$I^2t$ value for fusing ( $t_p=10\text{ms}$ )		$I^2t$	3200	$\text{A}^2\text{s}$
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ )		$di/dt$	150	$\text{A}/\mu\text{s}$
Peak gate current		$I_{GM}$	4	A
Average gate power dissipation		$P_{G(AV)}$	1	W
Peak gate power		$P_{GM}$	5	W

**ELECTRICAL CHARACTERISTICS** ( $T_j=25^{\circ}\text{C}$  unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
$I_{GT}$	$V_D=12\text{V } R_L=33\Omega$	10	-	80	mA
$V_{GT}$		-	-	1.3	V
$V_{GD}$	$V_D=V_{DRM} T_j=125^{\circ}\text{C } R_L=3.3\text{K}\Omega$	0.2	-	-	V
$I_L$	$I_G=1.2I_{GT}$	-	-	150	mA
$I_H$	$I_T=1\text{A}$	-	-	120	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^{\circ}\text{C}$	700	-	-	V/ $\mu\text{s}$

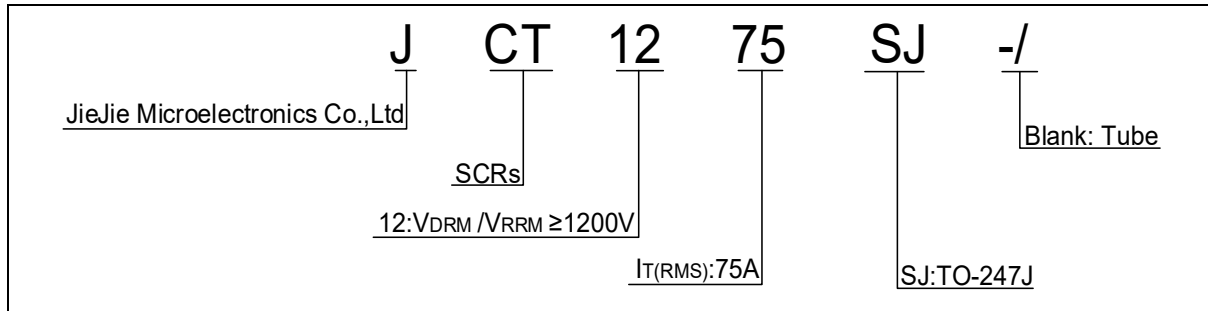
**STATIC CHARACTERISTICS**

Symbol	Parameter		Value(MAX)	Unit
$V_{TM}$	$I_{TM}=100\text{A } t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	1.5	V
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^{\circ}\text{C}$	50	$\mu\text{A}$
$I_{RRM}$		$T_j=125^{\circ}\text{C}$	10	mA

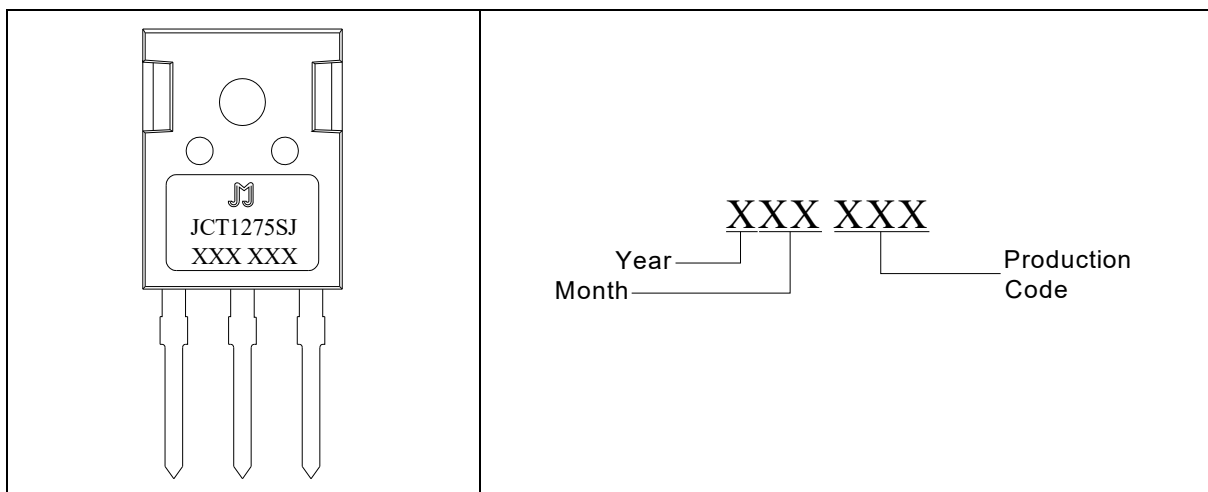
**THERMAL RESISTANCES**

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-247J	0.53	$^{\circ}\text{C/W}$

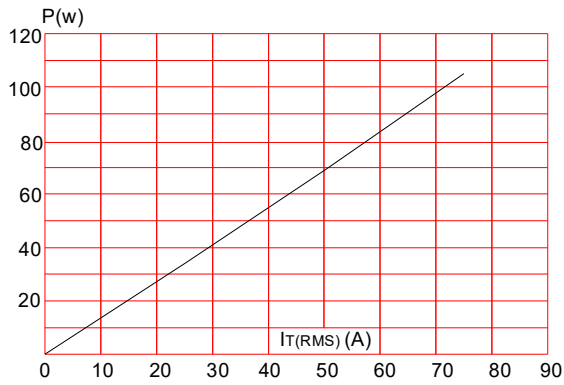
## ORDERING INFORMATION



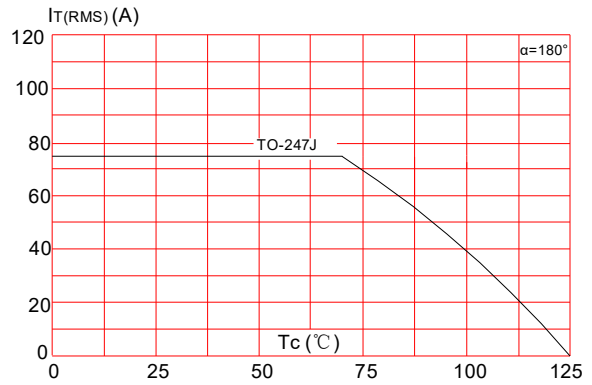
## MARKING



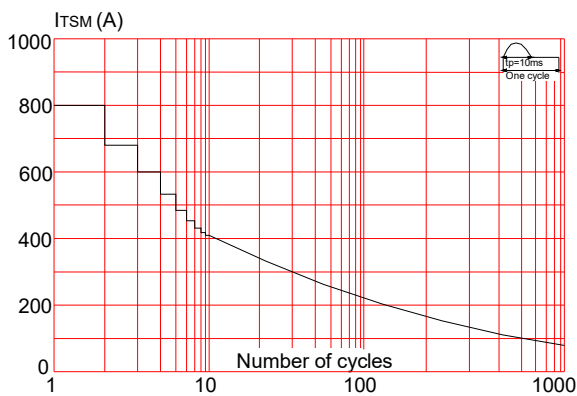
**FIG.1:** Maximum power dissipation versus RMS on-state current



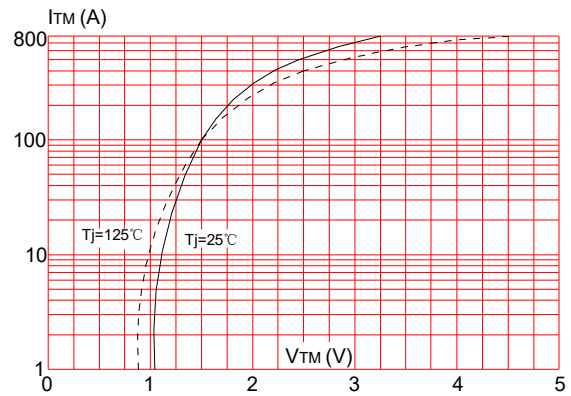
**FIG.2:** RMS on-state current versus case temperature



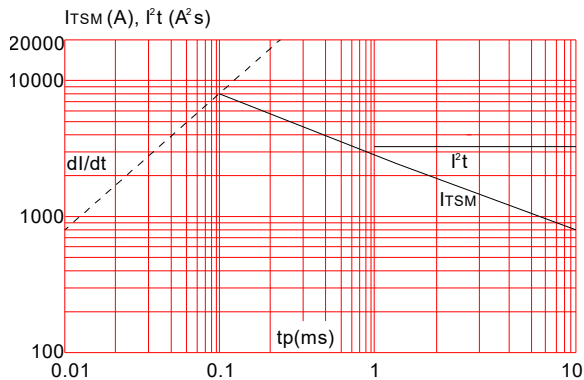
**FIG.3:** Surge peak on-state current versus number of cycles



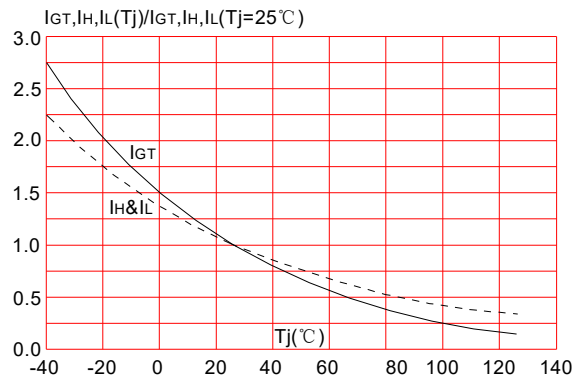
**FIG.4:** On-state characteristics (maximum values)



**FIG.5:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 10\text{ms}$ , and corresponding value of  $I^2t$  ( $dI/dt < 150\text{A}/\mu\text{s}$ )



**FIG.6:** Relative variations of gate trigger current, holding current and latching current versus junction temperature



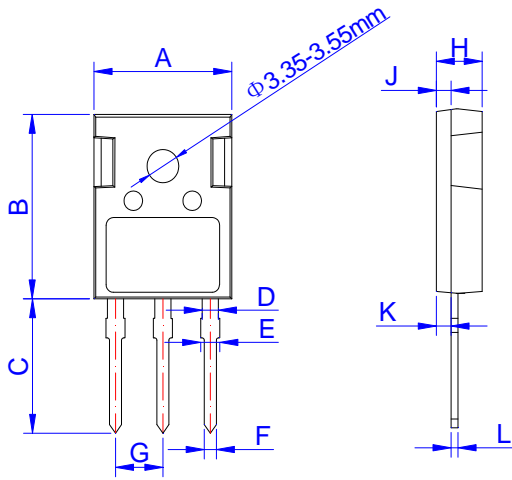
**ORDERING INFORMATION**

Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT1275SJ	1200	10~80	TO-247J	30	Tube

**Document Revision History**

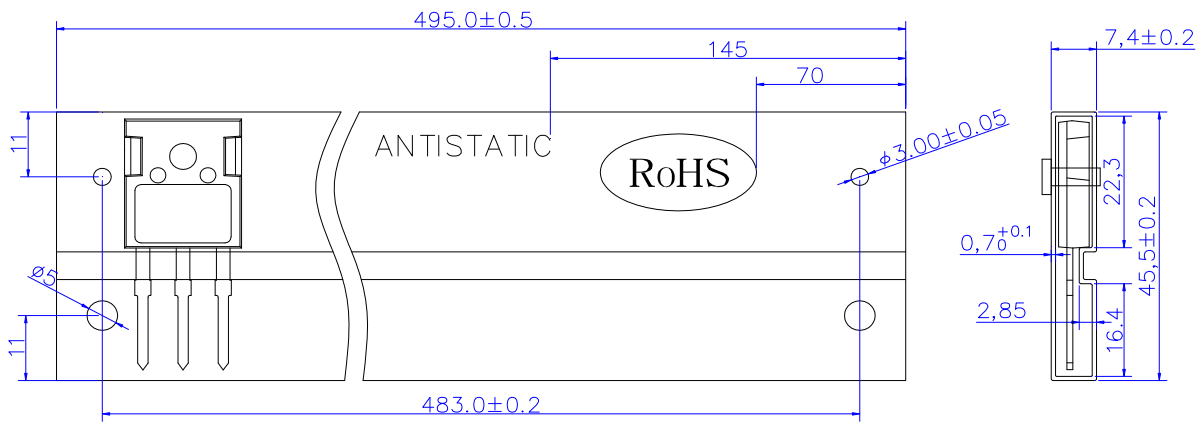
Date	Revision	Changes
Mar 19, 2022	1	Last update

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	22.20	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


DELIVERY MODE



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-247J	TUBE	30	450	2,250



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