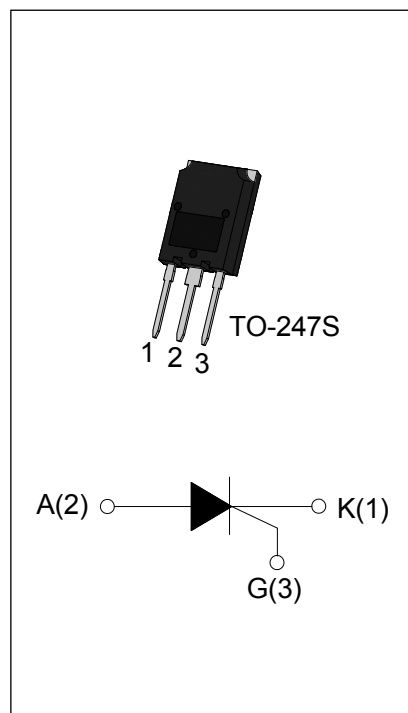




DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT1675CS SCRs provide high dv/dt rate with strong resistance to electromagnetic interference. They are especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. Package TO-247S is RoHS compliant. (2011/65/EU)



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	75	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	°C
Operating junction temperature range	T_j	-40-125	°C
Repetitive peak off-state voltage($T_j=25^{\circ}C$)	V_{DRM}	1600	V
Repetitive peak reverse voltage($T_j=25^{\circ}C$)	V_{RRM}	1600	V
Average on-state current ($T_c=83^{\circ}C$)	$I_{T(AV)}$	48	A
RMS on-state current	$I_{T(RMS)}$	75	A
TO-247S ($T_c=65^{\circ}C$)			
Non repetitive surge peak on-state current ($t_p=10ms$)	I_{TSM}	750	A
I^2t value for fusing ($t_p=10ms$)	I^2t	2800	A ² s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$)	di/dt	150	A/ μ s
Peak gate current	I_{GM}	4	A
Average gate power dissipation	$P_{G(AV)}$	1	W

Peak gate power	P _{GM}	5	W
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ELECTRICAL CHARACTERISTICS (T_j=25°C unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I _{GT}	V _D =12V R _L =33Ω	10	-	80	mA
V _{GT}		-	-	1.5	V
V _{GD}	V _D =V _{DRM} T _j =125°C R _L =3.3KΩ	0.25	-	-	V
I _L	I _G =1.2I _{GT}	-	-	150	mA
I _H	I _T =1A	-	-	120	mA
dV/dt	V _D =2/3V _{DRM} Gate Open T _j =125°C	1000	-	-	V/μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V _{TM}	I _{TM} =100A tp=380μs	T _j =25°C	1.8	V
V _{TO}	Threshold voltage	T _j =125°C	0.94	V
R _D	Dynamic resistance	T _j =125°C	4.5	mΩ
I _{DRM}	V _D =V _{DRM} V _R =V _{R_{RRM}}	T _j =25°C	50	μA
I _{R_{RRM}}		T _j =125°C	10	mA

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
R _{th(j-c)}	junction to case(AC)	TO-247S	0.6	°C/W

ORDERING INFORMATION

<p>J CT 16 75 CS -/</p> <p>JieJie Microelectronics Co.,Ltd</p> <p style="margin-left: 100px;">SCRs</p> <p style="margin-left: 100px;">16:V_{DRM}/V_{R_{RRM}}≥1600V</p> <p style="margin-left: 100px;">Blank: Tube</p> <p style="margin-left: 100px;">CS:TO-247S</p> <p style="margin-left: 100px;">I_{T(RMS)}:75A</p>
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FIG.1: Maximum power dissipation versus RMS on-state current

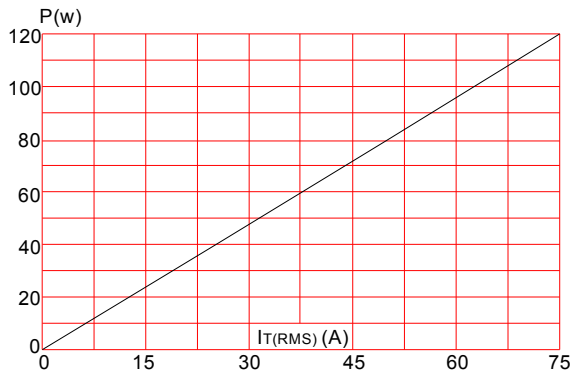


FIG.3: Surge peak on-state current versus number of cycles

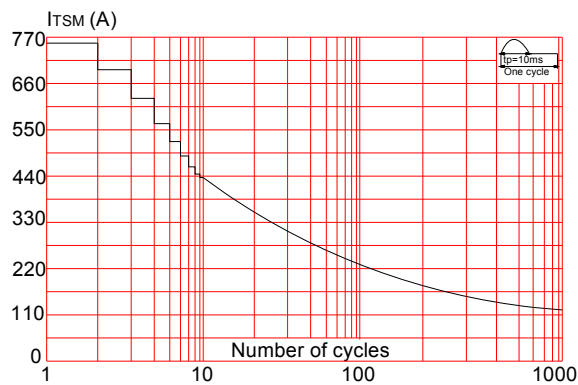


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of I^2t ($di/dt < 150\text{A}/\mu\text{s}$)

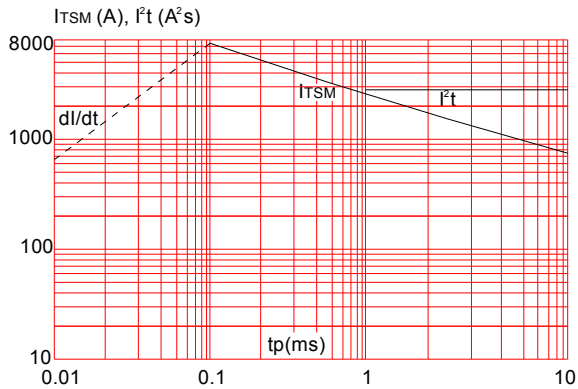


FIG.2: RMS on-state current versus case temperature

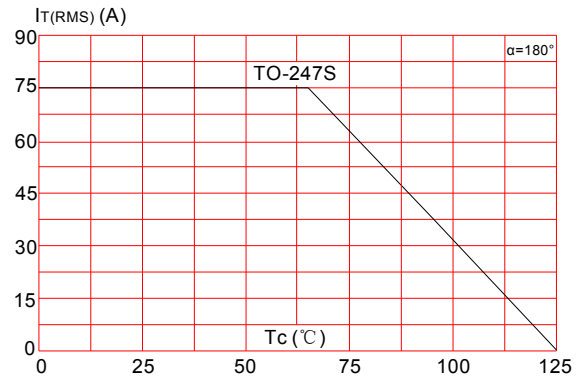


FIG.4: On-state characteristics (maximum values)

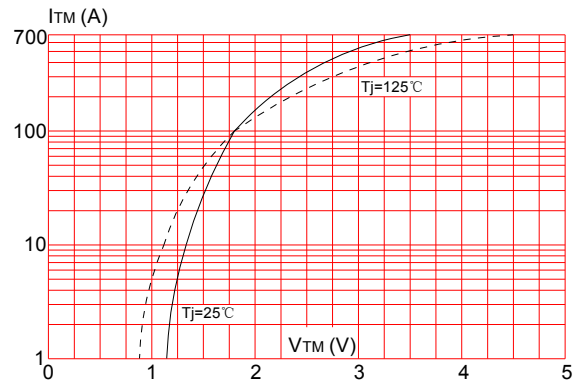
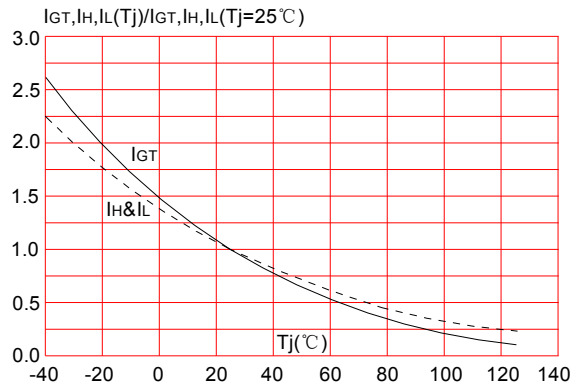


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



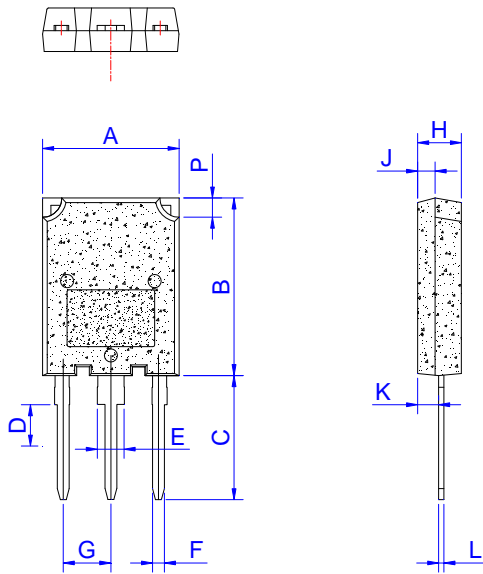
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT1675CS	1600	10-80	TO-247S	30	Tube

Document Revision History

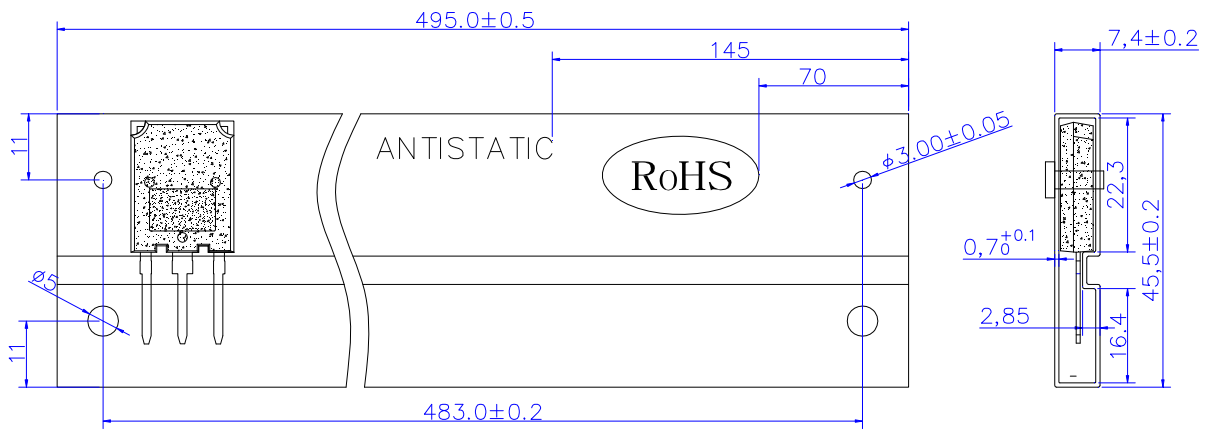
Date	Revision	Changes
June 22, 2021	3	Last update, add V_{TO} & R_D

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.1		16.1	0.594		0.634
B	19.8		20.8	0.78		0.819
C	13.8		14.8	0.543		0.583
D	3.00		4.00	0.118		0.157
E	2.75		3.35	0.108		0.132
F	1.30		1.50	0.051		0.059
G	5.10		5.80	0.201		0.228
H	4.50		5.50	0.177		0.217
J	1.45		2.15	0.057		0.085
K	1.90		2.80	0.075		0.110
L	0.55		0.80	0.022		0.031
P	2.00		2.40	0.079		0.094

DELIVERY MODE



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



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