

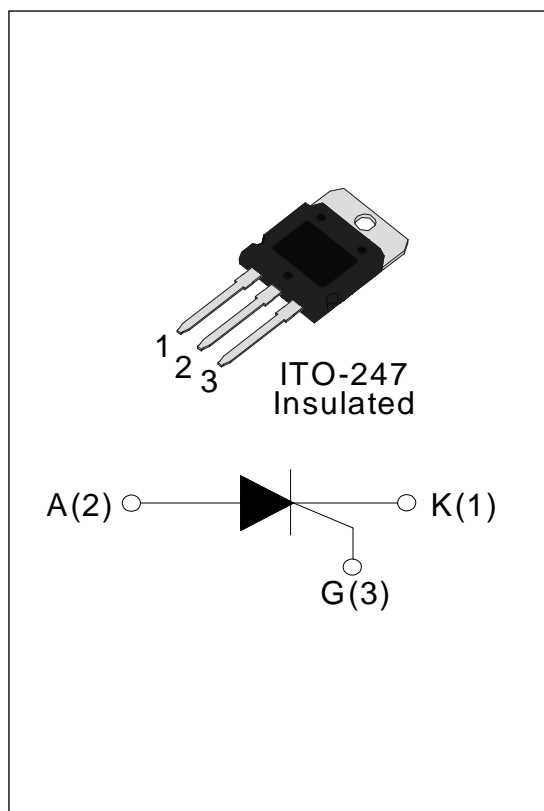


DESCRIPTION:

With high ability to withstand the shock Loading of large current, JCT1675IS provides 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. From all three pins to external heatsink, JCT1675IS provides an insulation voltage of 2500 VRMS.

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	75	A
V_{DRM}/V_{RRM}	1600	V
I_{GT}	≤ 70	mA



ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		T_{stg}	-40-150	$^{\circ}C$
Operating junction temperature range		T_j	-40-125	$^{\circ}C$
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
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	ITO-247(Ins) ($T_C=85^{\circ}C$)	$I_{T(RMS)}$	75	A
Non repetitive surge peak on-state current ($t_p=10ms$)		I_{TSM}	800	A
I^2t value for fusing ($t_p=10ms$)		I^2t	3200	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$)		di/dt	150	$A/\mu s$

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($T_j=25^{\circ}C$ unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	$V_D=12V R_L=33\Omega$	-	-	70	mA
V_{GT}		-	-	1.3	V
V_{GD}	$V_D=V_{DRM} T_j=125^{\circ}C R_L=3.3K\Omega$	0.2	-	-	V
I_L	$I_G=1.2I_{GT}$	-	-	200	mA
I_H	$I_T=1A$	-	-	150	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^{\circ}C$	1500	-	-	V/ μs

STATIC CHARACTERISTICS

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

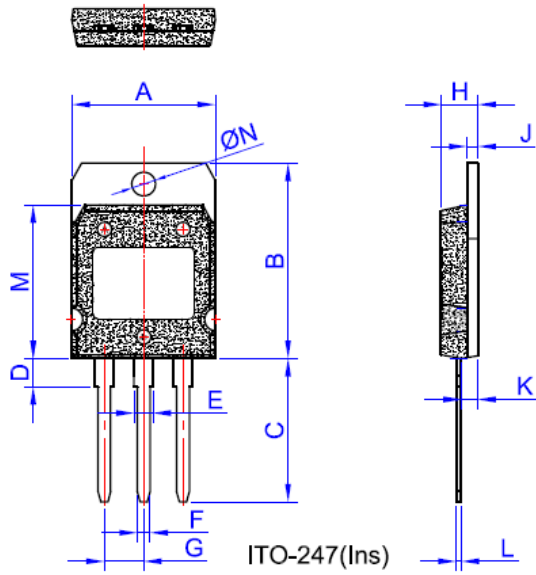
THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case(AC) ITO-247(Ins)	0.60	$^{\circ}C/W$

ORDERING INFORMATION

<p>J CT 16 75 IS</p> <p>JieJie Microelectronics Co.,Ltd</p> <p>SCRs</p> <p>16:$V_{DRM}/V_{RRM} \geq 1600V$</p> <p>IS:ITO-247(Ins)</p> <p>$I_{T(RMS)}:75A$</p>
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PACKAGE MECHANICAL DATA



Ref	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	19.7	19.9	20.1	0.776	0.783	0.791
B	26.9	27.1	27.3	1.059	1.067	1.075
C	19.4	19.9	20.4	0.764	0.783	0.803
D	3.8	3.9	4.0	0.15	0.154	0.157
E	2.56	2.66	2.76	0.101	0.105	0.109
F	1.66	1.76	1.86	0.065	0.069	0.073
G		5.45			0.215	
H	5.05	5.10	5.5	0.199	0.201	0.217
J	1.45	1.50	1.55	0.057	0.059	0.061
K	2.20	2.30	2.40	0.087	0.091	0.094
L	0.60	0.70	0.80	0.024	0.028	0.031
M	21.2	21.3	21.4	0.835	0.839	0.843
ØN	3.20	3.30	3.40	0.126	0.130	0.134

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

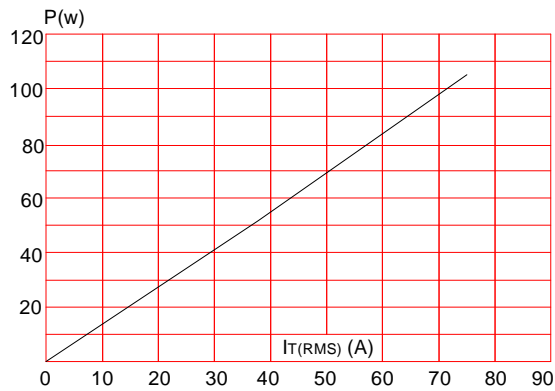


FIG.2: RMS on-state current versus case temperature

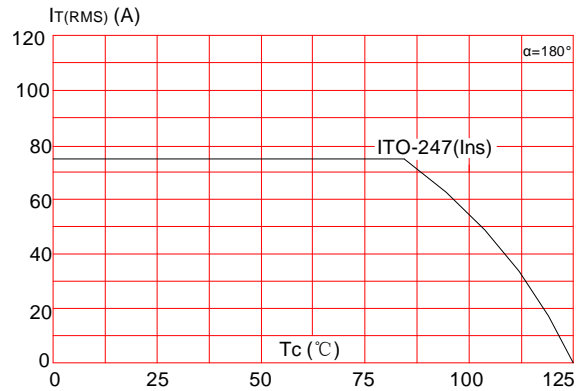


FIG.3: Surge peak on-state current versus number of cycles

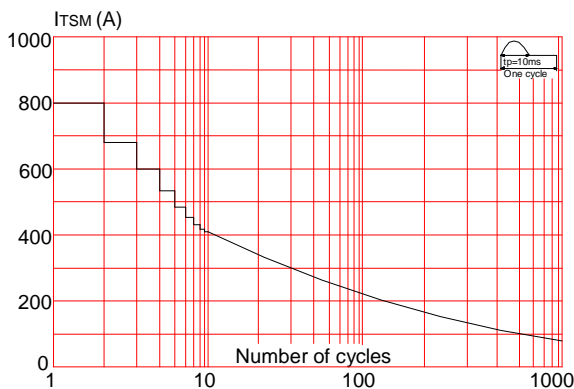


FIG.4: On-state characteristics (maximum values)

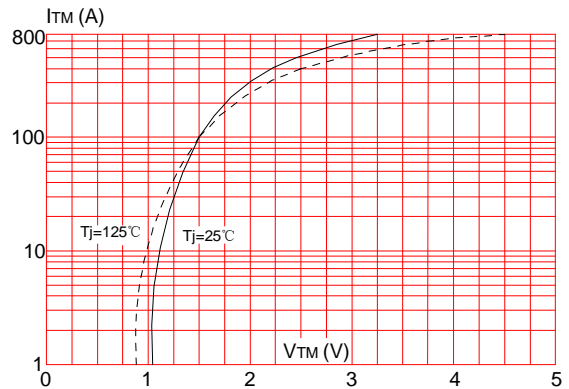


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of I^2t ($di/dt < 150\text{A}/\mu\text{s}$)

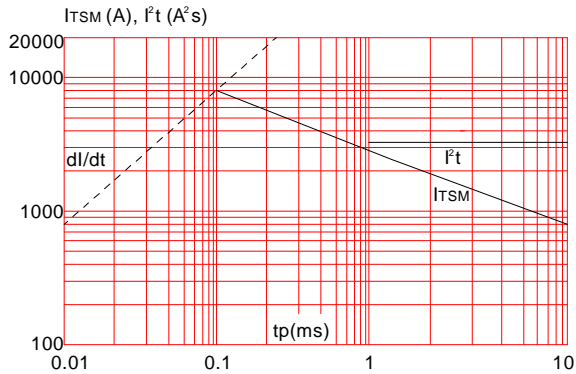
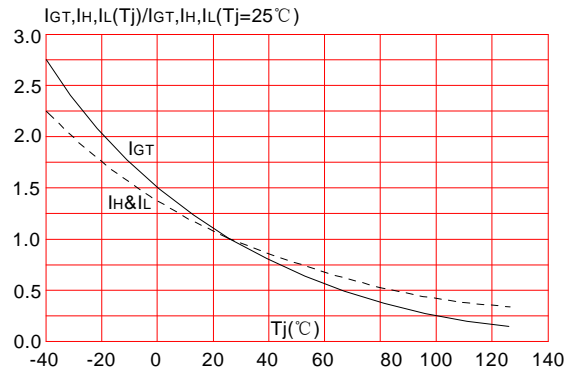



FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



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