



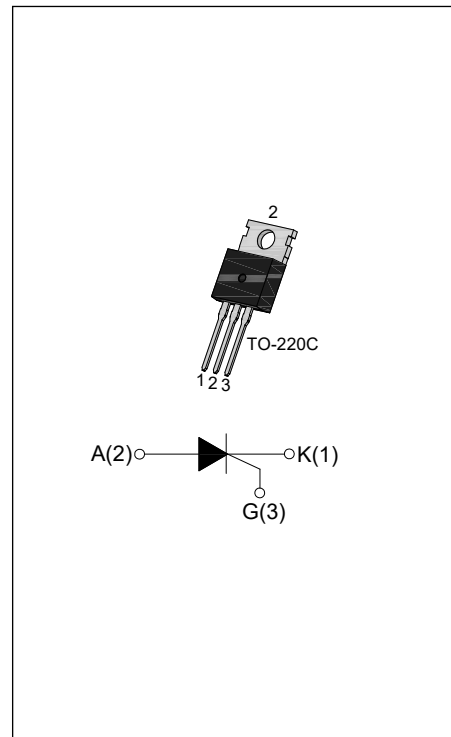
DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT1225C 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.complying with UL standards (File ref: E252906).

Package TO-220C is RoHS compliant. (2011/65/EU)

MAIN FEATURES

Symbol	Value	Symbol
V_{DRM}/V_{RRM}	1200	V
$I_{T(RMS)}$	25	A
I_{GT}	≤ 40	mA



ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		T_{stg}	-40-150	$^{\circ}\text{C}$
Operating junction temperature range		T_j	-40-125	$^{\circ}\text{C}$
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
RMS on-state current	TO-220C ($T_c=75^{\circ}\text{C}$)	$I_{T(RMS)}$	25	A
Non repetitive surge peak on-state current ($t_p=10\text{ms}$)		I_{TSM}	250	A
I^2t value for fusing ($t_p=10\text{ms}$)		I^2t	310	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$)		di/dt	100	$\text{A}/\mu\text{s}$
Peak gate current		I_{GM}	1.5	A
Average gate power dissipation		$P_{G(AV)}$	2	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}	$V_D=12\text{V}$ $R_L=33\Omega$	-	-	40	mA
V_{GT}		-	-	1.5	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125^{\circ}\text{C}$ $R_L=3.3\text{K}\Omega$	0.25	-	-	V
I_L	$I_G=1.2I_{GT}$	-	-	150	mA
I_H	$I_T=500\text{mA}$	-	-	120	mA
dv/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^{\circ}\text{C}$	1000	-	-	V/ μs

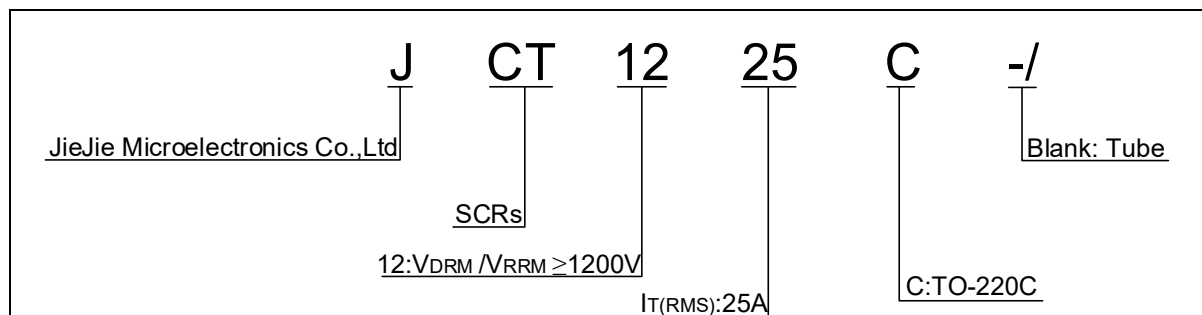
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM}=50\text{A}$ $t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	1.8	V
V_{TO}	Threshold voltage	$T_j=125^{\circ}\text{C}$	0.96	V
R_D	Dynamic resistance	$T_j=125^{\circ}\text{C}$	16	$\text{m}\Omega$
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^{\circ}\text{C}$	10	μA
I_{RRM}		$T_j=125^{\circ}\text{C}$	4	mA

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-220C	1.1	$^{\circ}\text{C}/\text{W}$

ORDERING INFORMATION



MARKING

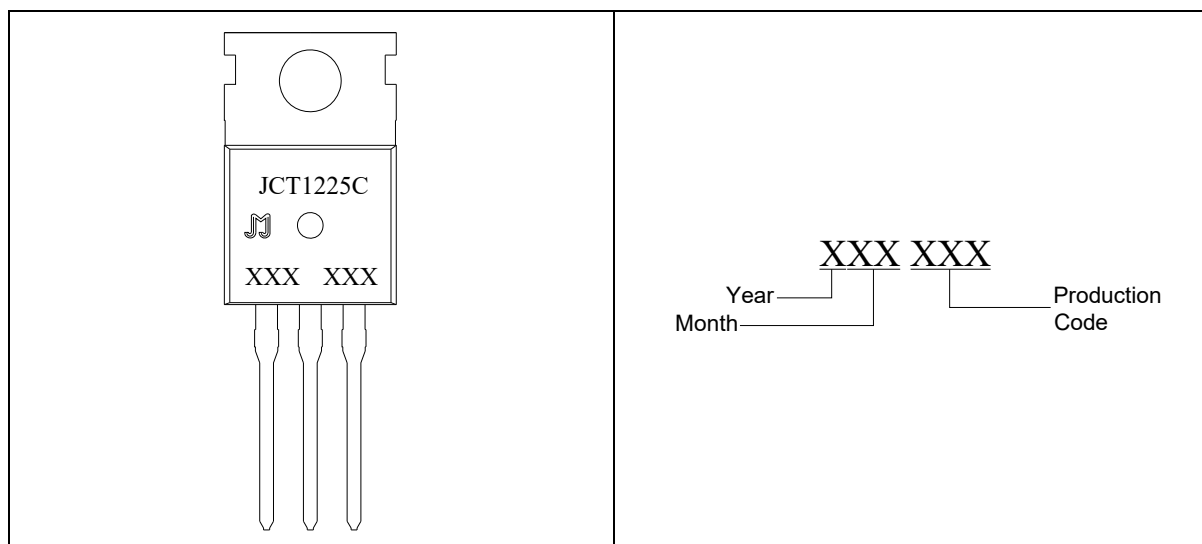
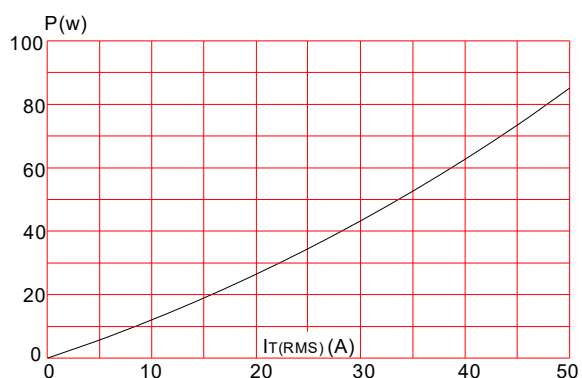
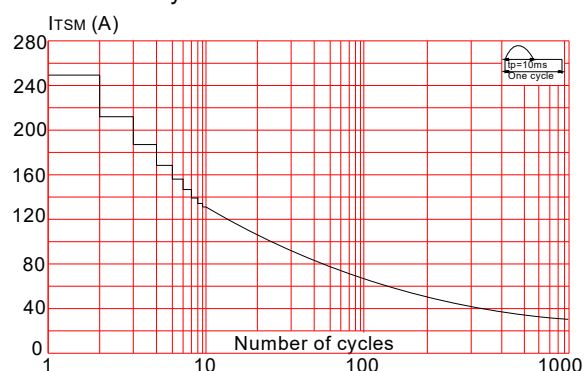
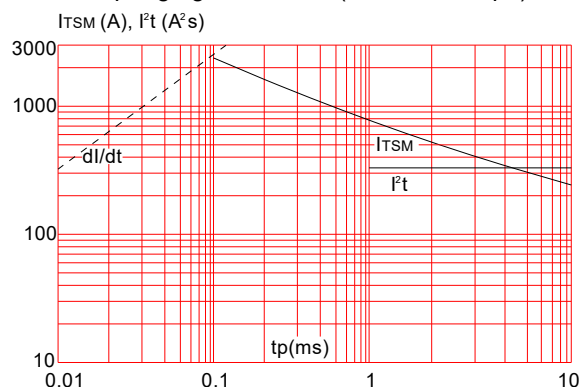
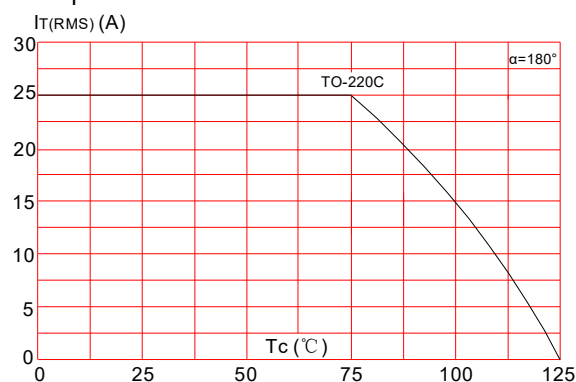
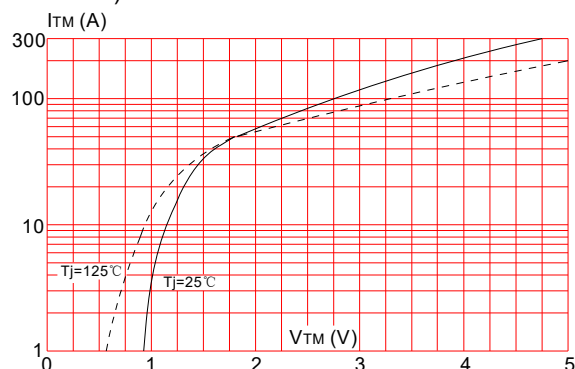
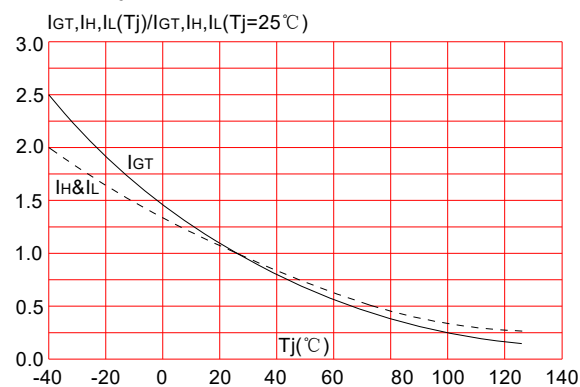


FIG.1 Maximum power dissipation versus RMS on-state current

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 ($di/dt < 100\text{A}/\mu\text{s}$)

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


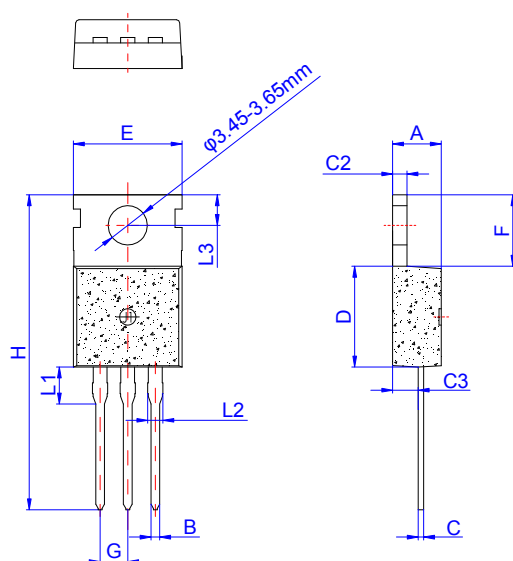
ORDERING INFORMATION

Order code	Voltage $V_{\text{DRM}}/V_{\text{RRM}}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT1225C	1200	40	TO-220C	50	Tube

Document Revision History

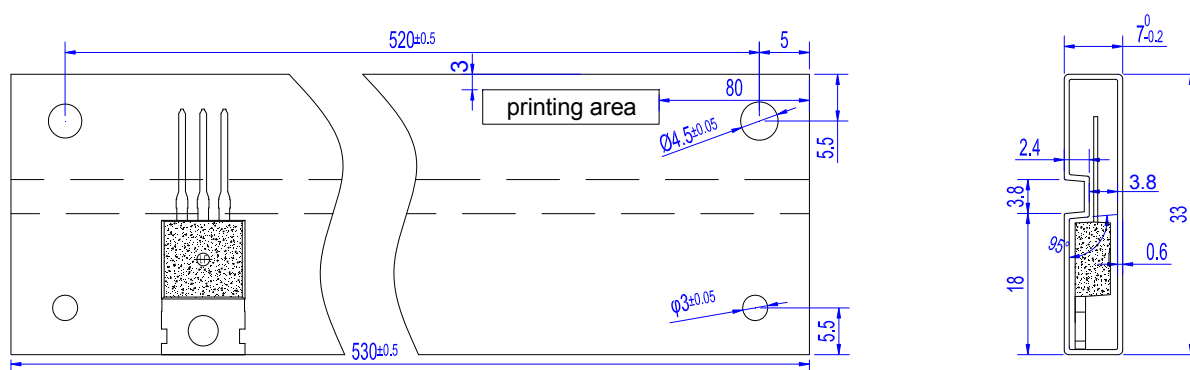
Date	Revision	Changes
Mar 24, 2022	1	Last update

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C	0.45		0.60	0.018		0.024
C2	1.23		1.32	0.048		0.052
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.39			0.133	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116

DELIVERY MODE



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220C	TUBE	50	1,000	5,000



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