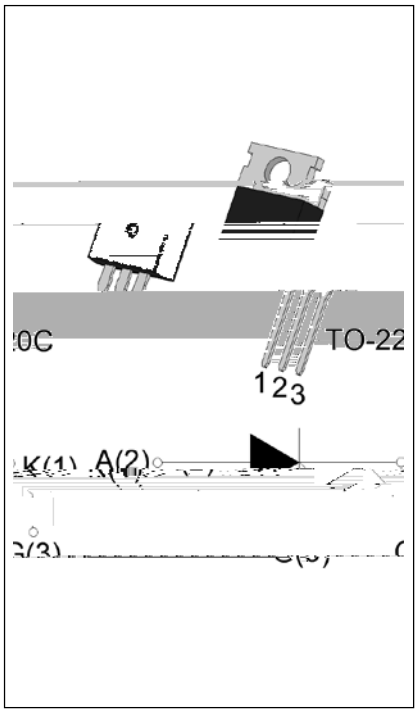
JCT1630C 30A SCR

Rev.A.1.1

DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT1630C 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-220C is RoHS compliant.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	30	A
V_{DRM} /V_{RRM}	1600	V
I_{GT}	40	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)	V_{DRM}	1600	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	1600	V
Average on-state current ($T_C \leq$ 86)	$I_{T(AV)}$	19	A
RMS on-state current ($T_C \leq$ 86)	$I_{T(RMS)}$	30	A
Non repetitive surge peak on-state current (t_p=10ms , T_j=25)	I_{TSM}	300	A
Non repetitive surge peak on-state current (t_p=8.3ms , T_j=25)		320	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	450	A^2s
Critical rate of rise of on-state current (I_G=2 I_{GT} , f=100Hz , T_j=125)	dI/dt	200	A s
Peak gate current (t_p=20 s , T_j=125)	I_{GM}	10	A

Average gate power dissipation (T_j=125)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	20	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	1.2	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	-	-	40	mA
V_{GT}		-	-	1	V
V_{GD}	V_D=V_{DRM} T_j=125 R_L=3.3k	0.25	-	-	V
I_L	I_G=1.2I_{GT}	-	-	150	mA
I_H	I_T=1A	-	-	120	mA
dV/dt	V_D=1070V Gate Open T_j=125	1500	-	-	V s
t_{on}	I_G=100mA I_A=1A I_R=100mA T_j=25	-	5	-	s
t_{off}		-	100	-	

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM}=60A t_p=380 s	T_j=25	1.8	V
V_{TO}	Threshold voltage	T_j=125	0.7	

J CT 16 30 C

FIG.7

PACKAGE MECHANICAL DATA

