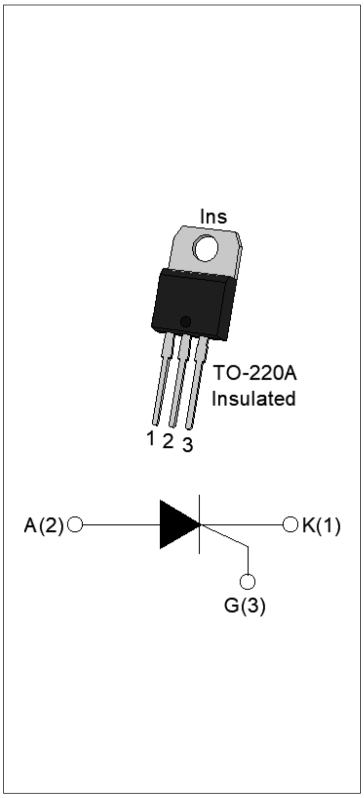
DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT816A of silicon controlled rectifiers 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. From all three terminals to external heatsink, JCT816A provides a rated insulation voltage of 2500 V_{RMS}, complying with UL standards (File ref: E252906). Package TO-220A is RoHS compliant.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	16	A
V_{DRM}/V_{RRM}	800	V
I_{GT}	≤15	mA

ABSOLUTE MAXIMUM RATINGS

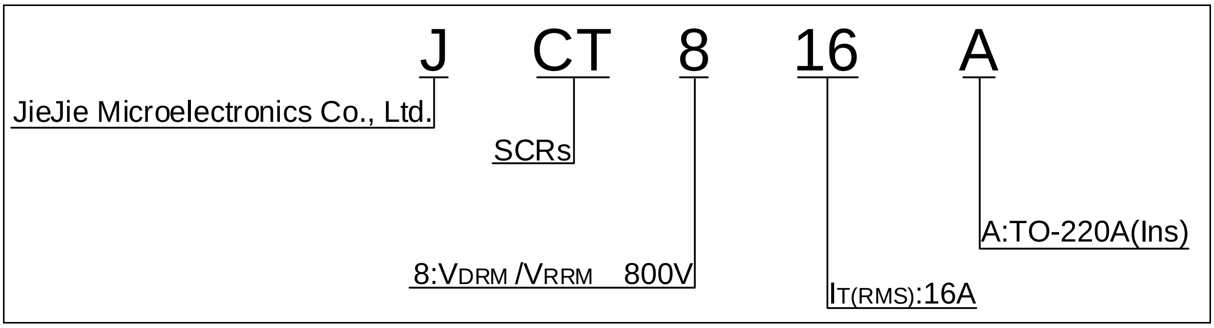
Parameter	**Symbol**	**Value**	**Unit**
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-125	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	800	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	800	V
Average on-state current (T_C 76)	$I_{T(AV)}$	10	A
RMS on-state current (T_C 76)	$I_{T(RMS)}$	16	A
Non repetitive surge peak on-state current (t_p=10ms, T_j=25)	I_{TSM}	150	A
Non repetitive surge peak on-state current (t_p=8.3ms, T_j=25)		165	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	113	A^2s
Critical rate of rise of on-state current (I_G=2 × I_{GT}, f=100Hz , T_j=125)	dI/dt	150	A/μs

Peak gate current (t_p=20μs , T_j=125)	I_{GM}	5	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}	0.5	kV

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	V_D=12V R_L=33Ω	-	-	15	mA
V_{GT}		-	-	1	V
V_{GD}	V_D=V_{DRM} T_j=125 R_L=3.3kΩ	0.2	-	-	V
I_L	I_G=1.2I_{GT}	-	-	60	mA
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	mA

ORDERING INFORMATION



MARKING

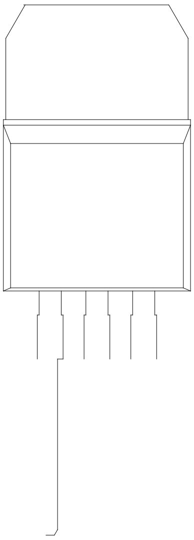


FIG.1: Maximum power dissipation versus RMS on-state current

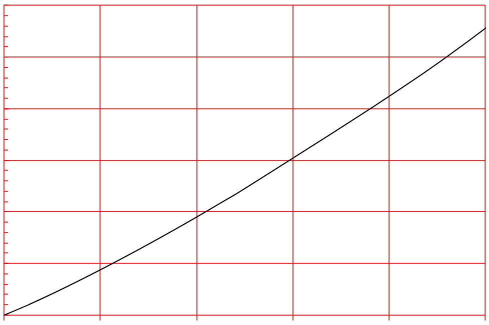


FIG.2: RMS on-state current versus case temperature

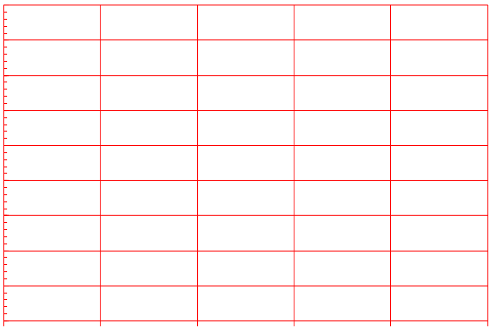
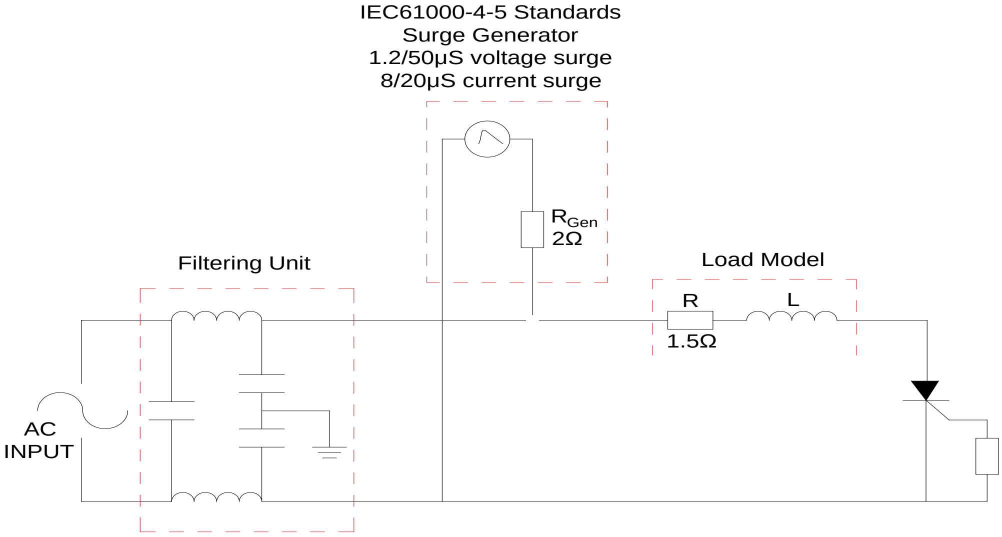


FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT816A	**800**	**15**	**TO-220A(Ins)**	**50**	**Tube**

Document Revision History

Date	Revision	Changes