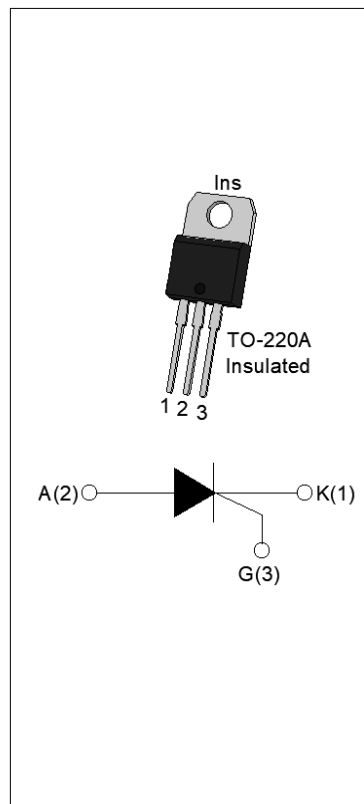




### DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT616A 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, JCT616A 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
$V_{DRM}/V_{RRM}$	600	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 ( $T_j=25^\circ C$ )	$V_{DRM}$	600	V
Repetitive peak reverse voltage ( $T_j=25^\circ C$ )	$V_{RRM}$	600	V
Average on-state current ( $T_c = 76^\circ C$ )	$I_{T(AV)}$	10	A
RMS on-state current ( $T_c = 76^\circ C$ )	$I_{T(RMS)}$	16	A
Non repetitive surge peak on-state current ( $t_p=10ms, T_j=25^\circ C$ )	$I_{TSM}$	150	A
Non repetitive surge peak on-state current ( $t_p=8.3ms, T_j=25^\circ C$ )		165	
$I^2t$ value for fusing ( $t_p=10ms, T_j=25^\circ C$ )	$I^2t$	113	$A^2s$
Critical rate of rise of on-state current ( $I_G=2 I_{GT}, f=100Hz, T_j=125^\circ C$ )	$di/dt$	150	A/s

Peak gate current ( $t_p=20\text{ s}$ , $T_j=125\text{ }^\circ\text{C}$ )	$I_{GM}$	5	A
Average gate power dissipation ( $T_j=125\text{ }^\circ\text{C}$ )	$P_{G(AV)}$	1	W
Peak gate power	$P_{GM}$	20	W
Peak pulse voltage ( $T_j=25\text{ }^\circ\text{C}$ ; non-repetitive,off-state;FIG.7)	$V_{pp}$	0.5	kV

**ELECTRICAL CHARACTERISTICS** ( $T_j=25\text{ }^\circ\text{C}$  unless otherwise specified)

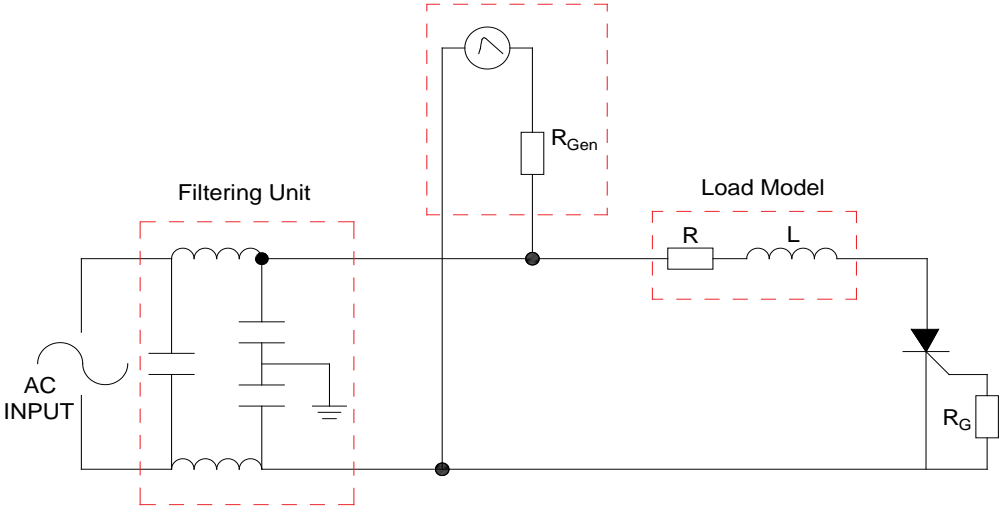
Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
$I_{GT}$	$V_D=12V\ R_L=33$	-	-	15	mA
$V_{GT}$		-	-	1	V
$V_{GD}$	$V_D=V_{DRM}\ T_j=125\text{ }^\circ\text{C}\ R_L=3.3K$	0.2	-	-	-





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

IEC61000-4-5 Standards  
Surge Generator



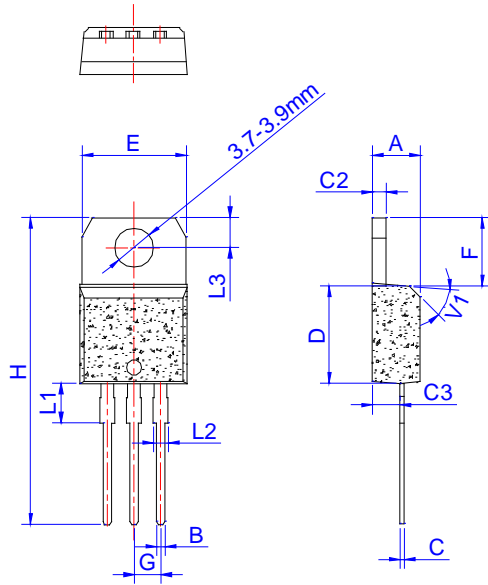
**ORDERING INFORMATION**

Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT616A	600	15	TO-220A(Ins)	50	Tube

**Document Revision History**

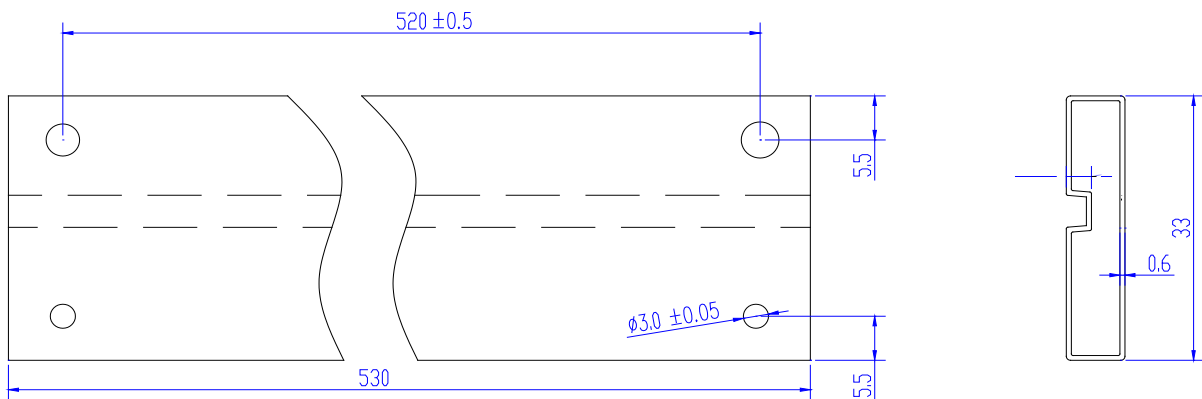
Date	Revision	Changes
Apr.13, 2023	A.1.0	Last update

PACKAGE MECHANICAL DATA




Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.25		6.85	0.246		0.270
G	2.40		2.70	0.094		0.106
H	28.0		29.8	1.102		1.173
L1	3.45		4.05	0.136		0.159
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	

DELIVERY MODE



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