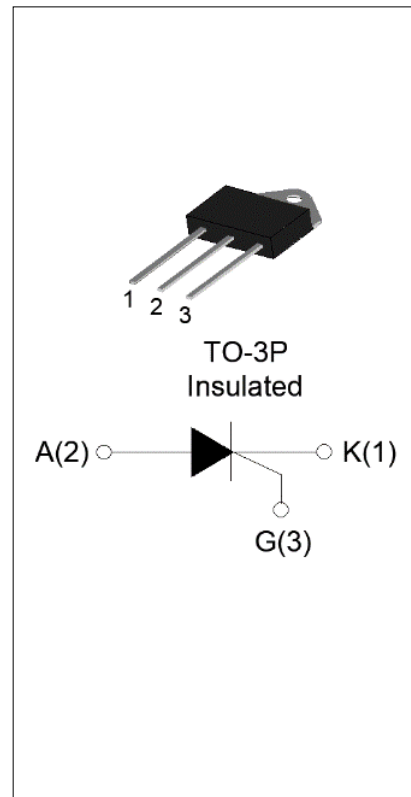




With high ability to withstand the shock loading of large current, JCT855Z SCR provides high  $dV/dt$  rate with strong resistance to electromagnetic interference. It is especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. From all three terminals to external heatsink, JCT855Z provides a rated insulation voltage of  $2500 V_{RMS}$ , complying with UL standards (File ref: E252906). Package TO-3P is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	55	A
$V_{DRM}/V_{RRM}$	800	V
$I_{GT}$	10-50	mA

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 ( $T_j=25^\circ C$ )	$V_{DRM}$	800	V
Repetitive peak reverse voltage ( $T_j=25^\circ C$ )	$V_{RRM}$	800	V
Average on-state current ( $T_c = 60^\circ C$ )	$I_{T(AV)}$	35	A
RMS on-state current ( $T_c = 60^\circ C$ )	$I_{T(RMS)}$	55	A
Non repetitive surge peak on-state current ( $t_p=10ms, T_j=25^\circ C$ )	$I_{TSM}$	700	A
Non repetitive surge peak on-state current ( $t_p=8.3ms, T_j=25^\circ C$ )		750	
$I^2t$ value for fusing ( $t_p=10ms, T_j=25^\circ C$ )	$I^2t$	2450	$A^2s$
Critical rate of rise of on-state current ( $I_G=2 I_{GT}, f=100Hz, T_j=125^\circ C$ )	$di/dt$	200	$A/s$

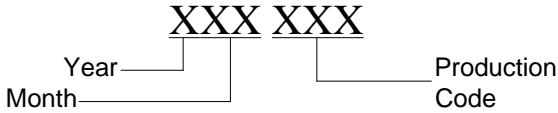
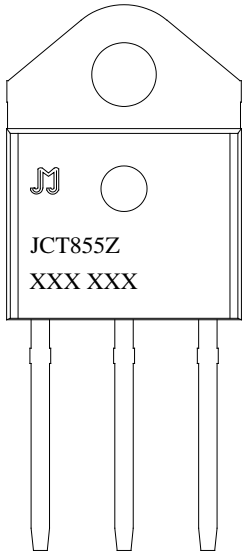
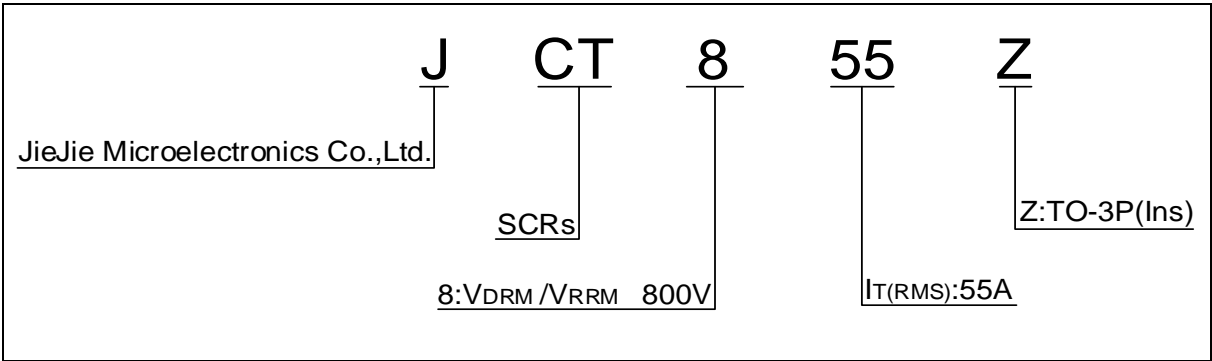
Peak gate current ( $t_p=20\text{ s}$ , $T_j=125\text{ }^\circ\text{C}$ )	$I_{GM}$	10	A
Average gate power dissipation ( $T_j=125\text{ }^\circ\text{C}$ )	$P_{G(AV)}$	1	W
Peak gate power	$P_{GM}$	20	W
Peak pulse voltage ( $T_j=25\text{ }^\circ\text{C}$ ; non-repetitive,off-state;FIG.7)	$V_{pp}$	0.7	kV

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

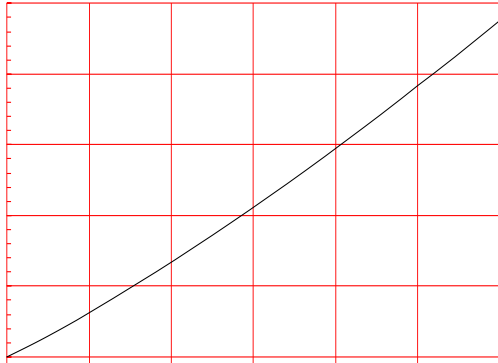
Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
$I_{GT}$	$V_D=12V\ R_L=33\ \Omega$	10	-	50	mA
$V_{GT}$		-	-	1	V
$V_{GD}$	$V_D=V_{DRM}\ T_j=125\text{ }^\circ\text{C}\ R_L=3.3K$	0.2	-	-	V
$I_L$	$I_G=1.2I_{GT}$	-	-	120	mA
$I_H$	$I_T=500mA$	-	-	100	mA
dV/dt	$V_D=540V$ Gate Open $T_j=125\text{ }^\circ\text{C}$	1500	-	-	V/s
$t_{on}$	$I_G=50mA\ I_A=500mA\ I_R=50mA$ $T_j=25\text{ }^\circ\text{C}$	-	4	-	s
$t_{off}$		-	130	-	

Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM}=80A\ t_p=380\ \mu\text{s}$	$T_j=25\text{ }^\circ\text{C}$	1.5	V
$V_{TO}$	Threshold voltage	$T_j=125\text{ }^\circ\text{C}$	0.76	V
$R_D$	Dynamic resistance	$T_j=125\text{ }^\circ\text{C}$	8.5	
$I_{DRM}$	$V_D=V_{DRM}\ V_R=V_{RRM}$	$T_j=25\text{ }^\circ\text{C}$	9	A
$I_{RRM}$		$T_j=125\text{ }^\circ\text{C}$	5	mA

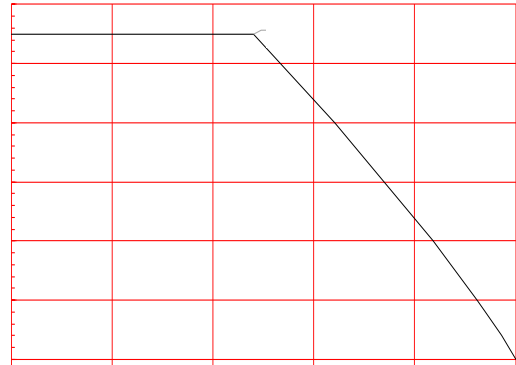
Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case(DC)	0.85	$^\circ\text{C}/W$
$R_{th(j-a)}$	junction to ambient (DC)	55	$^\circ\text{C}/W$



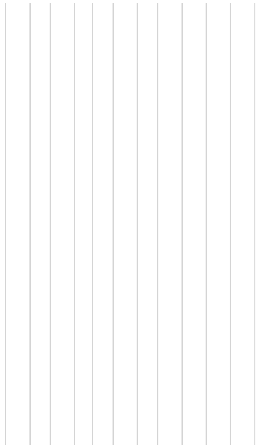
**FIG.1** Maximum power dissipation versus RMS on-state current



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

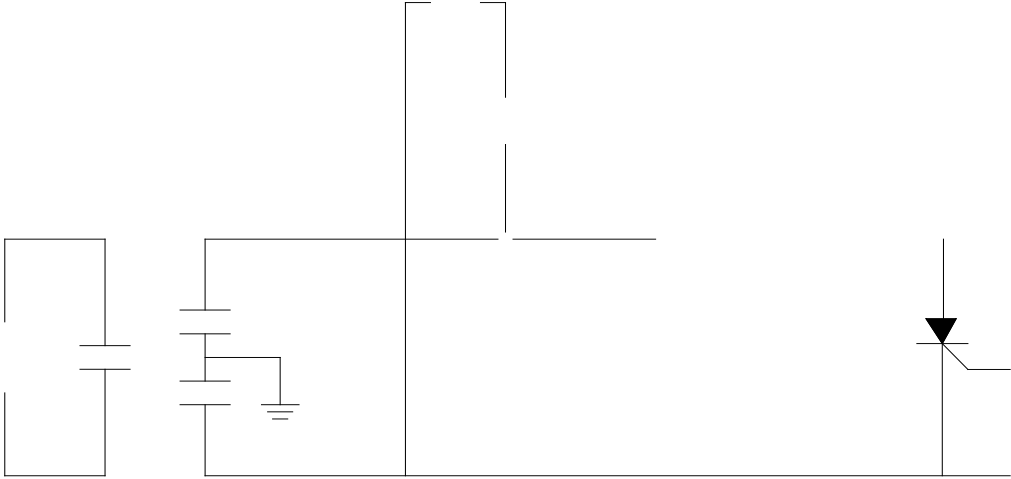


**FIG.3:** Surge peak on-state current versus number of cycles



**FIG.4:** On-state characteristics

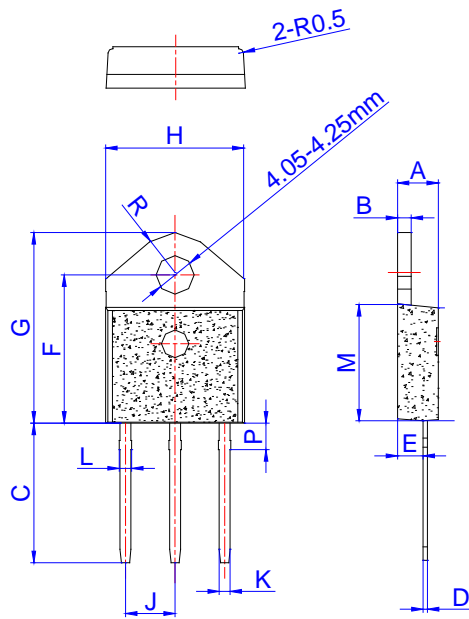
FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT855Z	800	10-50	TO-3P(Ins)	30	Tube

**Document Revision History**

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



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	1.45		1.55	0.057		0.061
C	14.35		15.60	0.565		0.614
D	0.50		0.70	0.020		0.028
E	2.70		2.90	0.106		0.114
F	15.80		16.50	0.622		0.650
G	20.40		21.10	0.803		0.831
H	15.10		15.50	0.594		0.610
J	5.40		5.65	0.213		0.222
K	1.10		1.40	0.043		0.055
L	1.25		1.45	0.049		0.057
M	12.37		12.77	0.487		0.503
P	2.80		3.00	0.110		0.118
R		4.35			0.171	



Information furnished in this document is believed to be accurate and reliable.  
However, Jiangsu JieJie Microelectronics Co., Ltd.