



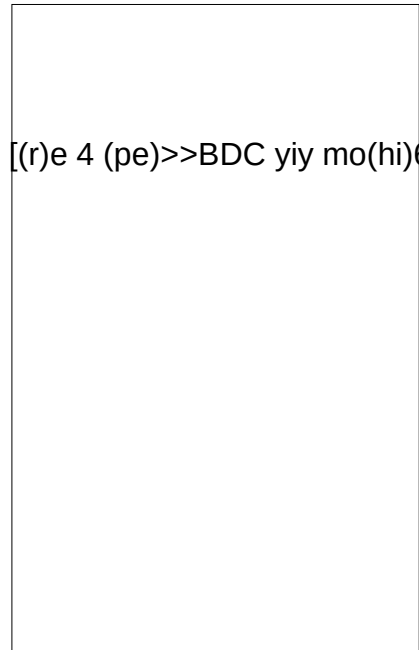
JCT820E 20A SCR

Rev.A.1.1

DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT820E SCR provides high dV/dt rate with strong resistance to electromagnetic

interference. It is especially recommended for use in the following applications: (1) as a switch for AC power; (2) as a switch for DC power; (3) as a switch for pulse power; (4) as a switch for high frequency power; (5) as a switch for high voltage power; (6) as a switch for high current power; (7) as a switch for high speed power; (8) as a switch for high precision power; (9) as a switch for high reliability power; (10) as a switch for high performance power.



Peak gate power	P_{GM}	20	W
Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.8)	V_{pp}	0.5	kV

ELECTRICAL CHARACTERISTICS (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}	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3k$	0.2	-	-	V
I_L	$I_G=1.2I_{GT}$	-	-	60	mA
I_H	$I_T=500mA$	-	-	50	mA
dV/dt	$V_D=540V$ Gate Open $T_j=125$	300	-	-	V/s
t_{on}	$I_G=40mA$ $I_A=400mA$ $I_R=40mA$ $T_j=25$	-	5	-	s
t_{off}		-	70	-	

STATIC CHARACTERISTICS

Symbol	Parameter	Value(MAX.)	Unit
V_{TM}	$I_{TM}=40A$ $t_p=380$ s $T_j=25$	1.55	V

ORDERING INFORMATION

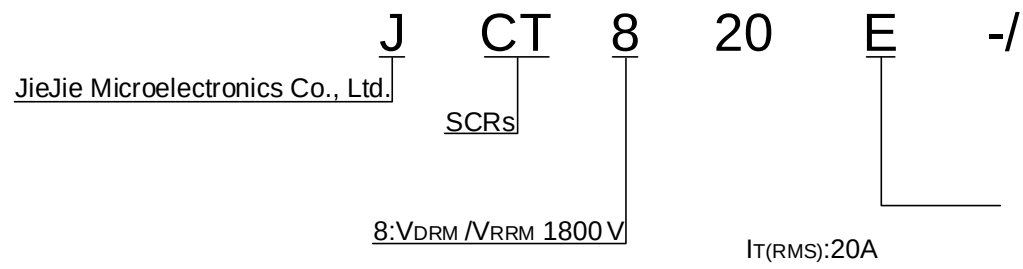


FIG.1: Maximum power dissipation versus
RMS on-state current



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

FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

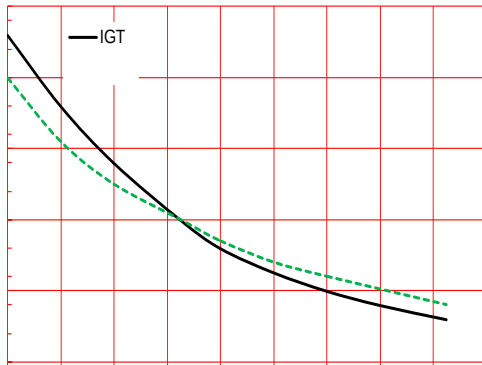
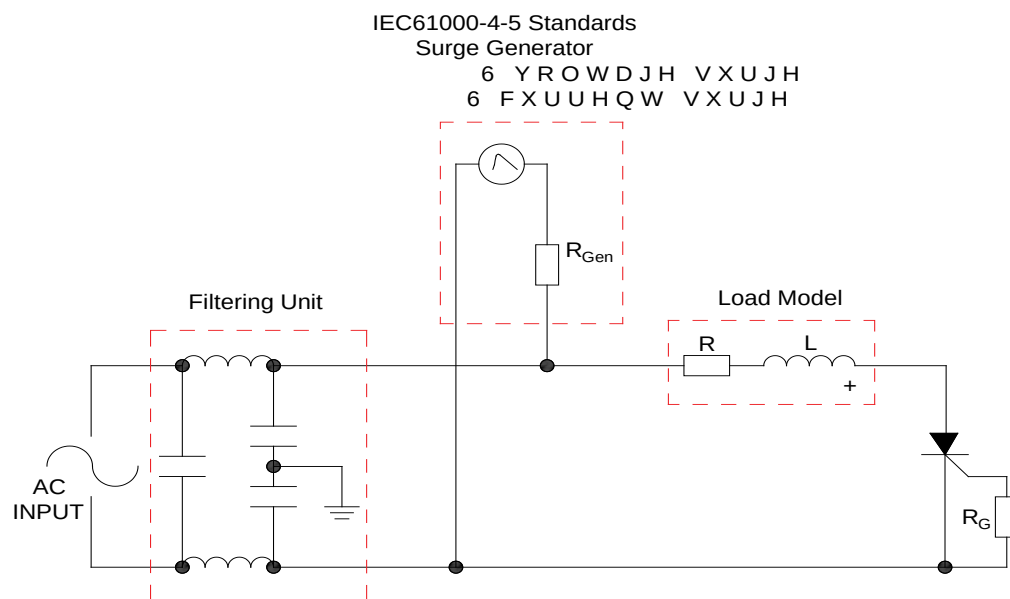


FIG.8 ÖTest circuit for inductive and resistive loads to IEC-61000-4-5 standards.



SOLDERING PARAMETERS

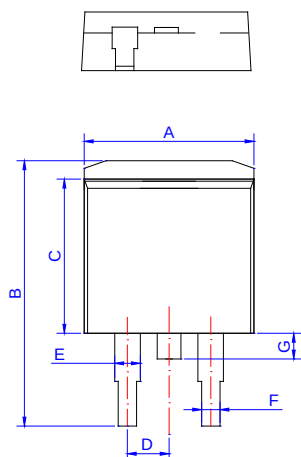
Reflow Condition	Pb-Free assembly (see figure at right)
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ORDERING INFORMATION

Order code	Voltage $V_{\text{DRM}}/V_{\text{RRM}}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT820E	800	15	TO-263	50	Tube
JCT820E-TR				800	Tape & Reel

Document Revision History

Date	Revision	Changes
Apr.13, 2023	A.1.0	Last update
Oct.16, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA



	Dimensions					
Ref.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.90		10.20	0.390		0.402
B	14.70		15.80	0.579		0.622
C	9.40		9.60	0.370		0.378
D	2.40			0.094		
E	1.20		1.50	0.047		0.059
F	0.75		0.85	0.029		0.033

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