

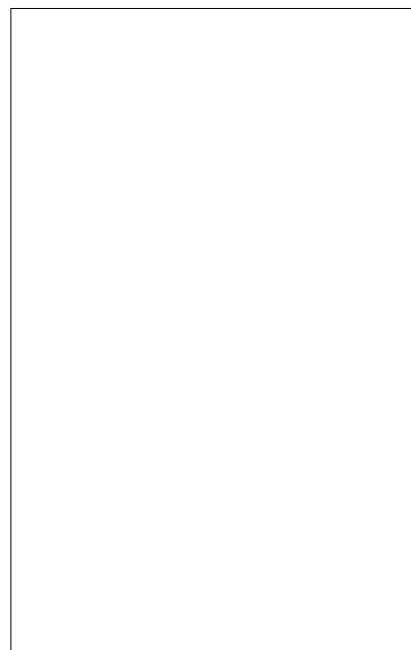


JCT625E 25A SCR

Rev.A.1.1

DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT625E 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-263 is RoHS compliant.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	25	A
V_{DRM}/V_{RRM}	600	V
I_{GT}	20	mA

ABSOLUTE MAXIMUM RATINGS

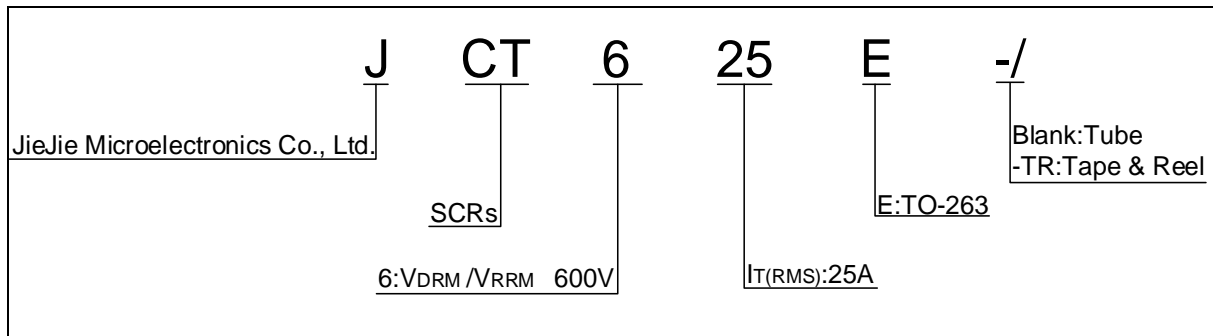
Parameter	Symbol	Value	Unit
Storage	T_j	-40 to 150	°C
Operating	T_c	-40 to 100	°C
Peak Forward Current	I_{FM}	100	A
Peak Reverse Current	I_{RM}	10	A
Peak Forward Voltage	V_{FM}	1.0	V
Peak Reverse Voltage	V_{RM}	600	V
Peak Forward Power	P_{FM}	1.0	W
Peak Reverse Power	P_{RM}	0.5	W
Peak Forward Current (100µs)	$I_{FM(100\mu s)}$	100	A
Peak Reverse Current (100µs)	$I_{RM(100\mu s)}$	10	A
Peak Forward Voltage (100µs)	$V_{FM(100\mu s)}$	1.0	V
Peak Reverse Voltage (100µs)	$V_{RM(100\mu s)}$	600	V
Peak Forward Power (100µs)	$P_{FM(100\mu s)}$	1.0	W
Peak Reverse Power (100µs)	$P_{RM(100\mu s)}$	0.5	W
Peak Forward Current (10µs)	$I_{FM(10\mu s)}$	100	A
Peak Reverse Current (10µs)	$I_{RM(10\mu s)}$	10	A
Peak Forward Voltage (10µs)	$V_{FM(10\mu s)}$	1.0	V
Peak Reverse Voltage (10µs)	$V_{RM(10\mu s)}$	600	V
Peak Forward Power (10µs)	$P_{FM(10\mu s)}$	1.0	W
Peak Reverse Power (10µs)	$P_{RM(10\mu s)}$	0.5	W
Peak Forward Current (1µs)	$I_{FM(1\mu s)}$	100	A
Peak Reverse Current (1µs)	$I_{RM(1\mu s)}$	10	A
Peak Forward Voltage (1µs)	$V_{FM(1\mu s)}$	1.0	V
Peak Reverse Voltage (1µs)	$V_{RM(1\mu s)}$	600	V
Peak Forward Power (1µs)	$P_{FM(1\mu s)}$	1.0	W
Peak Reverse Power (1µs)	$P_{RM(1\mu s)}$	0.5	W
Peak Forward Current (100ns)	$I_{FM(100ns)}$	100	A
Peak Reverse Current (100ns)	$I_{RM(100ns)}$	10	A
Peak Forward Voltage (100ns)	$V_{FM(100ns)}$	1.0	V
Peak Reverse Voltage (100ns)	$V_{RM(100ns)}$	600	V
Peak Forward Power (100ns)	$P_{FM(100ns)}$	1.0	W
Peak Reverse Power (100ns)	$P_{RM(100ns)}$	0.5	W
Peak Forward Current (10ns)	$I_{FM(10ns)}$	100	A
Peak Reverse Current (10ns)	$I_{RM(10ns)}$	10	A
Peak Forward Voltage (10ns)	$V_{FM(10ns)}$	1.0	V
Peak Reverse Voltage (10ns)	$V_{RM(10ns)}$	600	V
Peak Forward Power (10ns)	$P_{FM(10ns)}$	1.0	W
Peak Reverse Power (10ns)	$P_{RM(10ns)}$	0.5	W
Peak Forward Current (1ns)	$I_{FM(1ns)}$	100	A
Peak Reverse Current (1ns)	$I_{RM(1ns)}$	10	A
Peak Forward Voltage (1ns)	$V_{FM(1ns)}$	1.0	V
Peak Reverse Voltage (1ns)	$V_{RM(1ns)}$	600	V
Peak Forward Power (1ns)	$P_{FM(1ns)}$	1.0	W
Peak Reverse Power (1ns)	$P_{RM(1ns)}$	0.5	W
Peak Forward Current (100ps)	$I_{FM(100ps)}$	100	A
Peak Reverse Current (100ps)	$I_{RM(100ps)}$	10	A
Peak Forward Voltage (100ps)	$V_{FM(100ps)}$	1.0	V
Peak Reverse Voltage (100ps)	$V_{RM(100ps)}$	600	V
Peak Forward Power (100ps)	$P_{FM(100ps)}$	1.0	W
Peak Reverse Power (100ps)	$P_{RM(100ps)}$	0.5	W
Peak Forward Current (10ps)	$I_{FM(10ps)}$	100	A
Peak Reverse Current (10ps)	$I_{RM(10ps)}$	10	A
Peak Forward Voltage (10ps)	$V_{FM(10ps)}$	1.0	V
Peak Reverse Voltage (10ps)	$V_{RM(10ps)}$	600	V
Peak Forward Power (10ps)	$P_{FM(10ps)}$	1.0	W
Peak Reverse Power (10ps)	$P_{RM(10ps)}$	0.5	W
Peak Forward Current (1ps)	$I_{FM(1ps)}$	100	A
Peak Reverse Current (1ps)	$I_{RM(1ps)}$	10	A
Peak Forward Voltage (1ps)	$V_{FM(1ps)}$	1.0	V
Peak Reverse Voltage (1ps)	$V_{RM(1ps)}$	600	V
Peak Forward Power (1ps)	$P_{FM(1ps)}$	1.0	W
Peak Reverse Power (1ps)	$P_{RM(1ps)}$	0.5	W

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 ($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	$V_D=12V R_L=33$	-	-	20	mA

ORDERING INFORMATION



MARKING

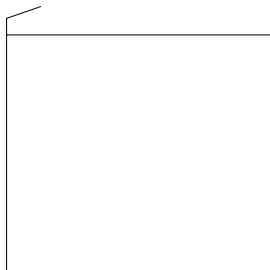


FIG.1: Maximum power dissipation versus RMS on-state current

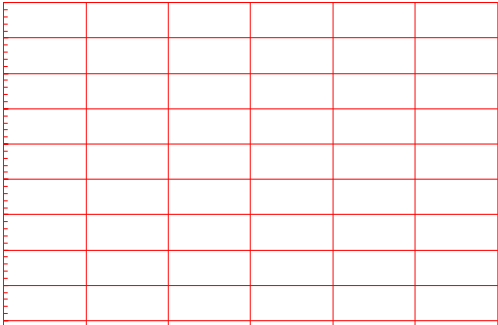


FIG.2: RMS on-state current versus case temperature

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

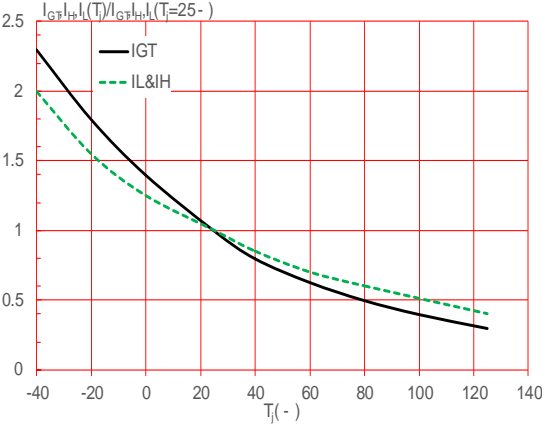
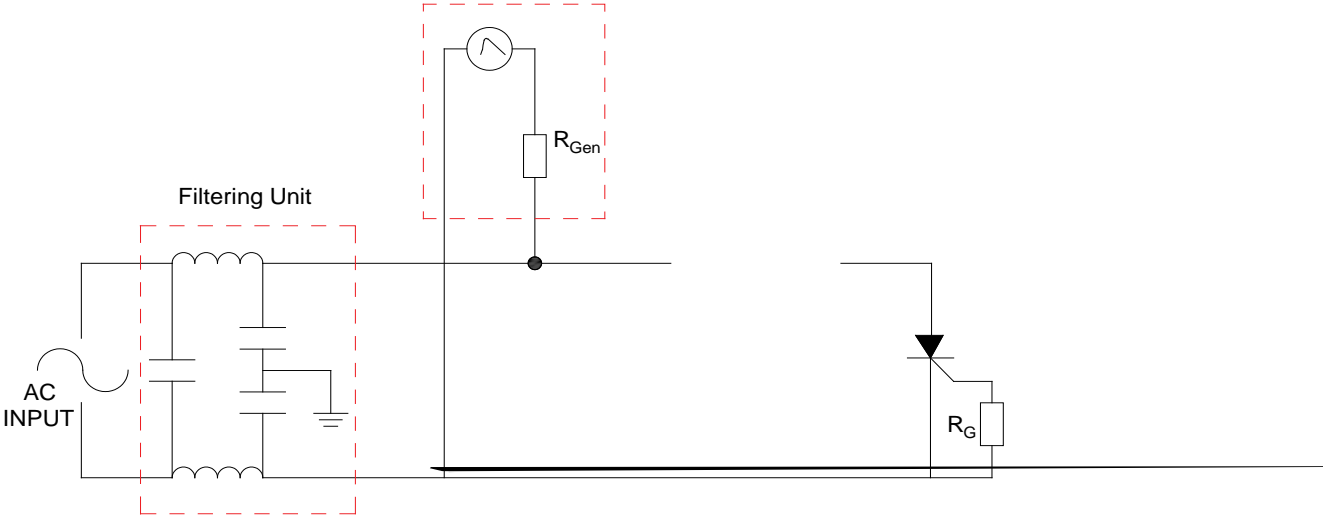


FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.

IEC61000-4-5 Standards
Surge Generator



ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT625E	600	20	TO-263	50	Tube
JCT625E-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

