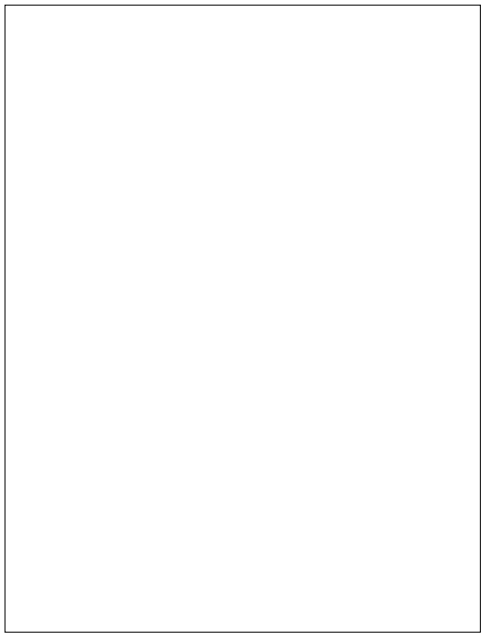
JX020K 2 A Sensitive SCR

Rev.A.1.1

DESCRIPTION:

The JX020K SCR provides high dV/dt rate with strong resistance to electromagnetic interface. It is especially recommended for use on residual current circuit breaker, straight hair, igniter etc. Package TO-252 is RoHS compliant.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	2	A
V_{DRM} /V_{RRM}	600	V
I_{GT}	200	A

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-125 [7]	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	600	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	600	V
Average on-state current (T_C 0 104)	$I_{T(AV)}$	1.3	A
RMS on-state current (T_C 0104)	$I_{T(RMS)}$	2	A
Non repetitive surge peak on-state current (t_p=10ms , T_j=25)	I_{TSM}	20	A
Non repetitive surge peak on-state current (t_p=8.3ms , T_j=25)		22	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	2	A^2s
Critical rate of rise of on-state current (I_G=2 I_{GT} , f=100Hz , T_j=125)	dI/dt	50	A s
Peak gate current (t_p=20 s, T_j=125)	I_{GM}	1.2	A
Average gate power dissipation (T_j=125)	$P_{G(AV)}$	0.2	W

Peak gate power	P_{GM}	2	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.8)	V_{pp}	0.5	kV

NOTE 1: Operating junction temperature T_j is up to 125 when a resistor 1k is connected between Gate and Cathode. Without this resistor, the T_j is up to 110 only.

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	V_D=12V R_L=33	-	50	200	A
V_{GT}		-	0.6	0.8	V
V_{GD}	V_D=V_{DRM} T_j=125	0.2	-	-	V
I_L	I_G=1.2 I_{GT}	-	-	6	mA
I_H	I_T=0.05A	-	-	5	mA
dV/dt	V_D=400V T_j=125 R_{GK}=1k	20	-	-	V s
	V_D=400V T_j=125 R_{GK}=	100	-	-	
t_{on}	I_G=1				

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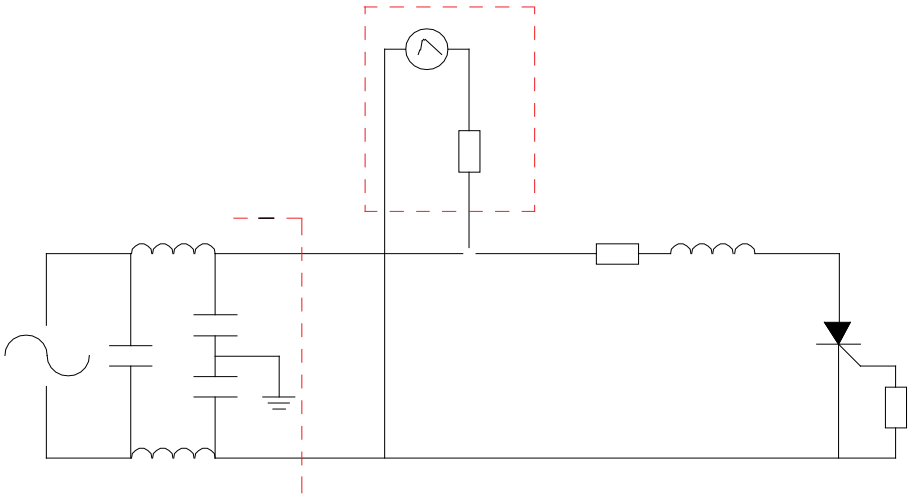
FIG.8 ÖTest circuit for inductive and resistive loads to IEC-61000-4-5 standards.



ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(εA)

PACKAGE MECHANICAL DATA

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10		2.50	0.083		0.098
A2	0		0.15	0		0.006
B	0.66		0.86	0.026		0.034
B2	5.18		5.48	0.202		0.216
C	0.40		0.60	0.016		0.024
C2	0.44		0.58	0.017		0.023
D	5.90		6.30	0.232		0.248
D1						
E	6.40		6.80	0.252		0.268
E1	4.63			0.182		
G	4.47		4.67	0.176		0.184
G1	2.18		2.38	0.086		0.094
L	1.09		1.21	0.043		0.048
L2	1.35		1.65	0.053		0.065

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