



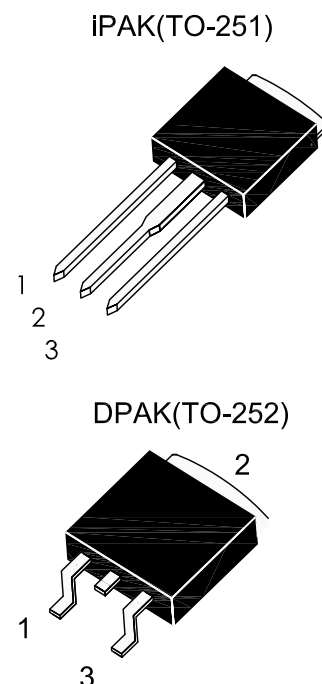
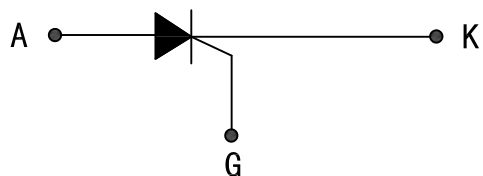
JX04 Series 4A SENSITIVE SCRs

DESCRIPTION:

Highly sensitive triggering levels, the JX04 Series SCRs is suitable for all applications, where the available gate current is limited, such as capacitive discharge ignitions, motor control in kitchen aids, overvoltage crowbar protection in low power supplies...

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	4	A
V_{DRM}/V_{RRM}	600	V
I_{GT}	≤ 200	μA



ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		T_{stg}	- 40 to +150	$^{\circ}C$
Operating junction temperature range		T_j	- 40 to +110	$^{\circ}C$
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
RMS on-state current (180 conduction angle)	$T_c=35^{\circ}C$	$I_{T(RMS)}$	4	A
Average on-state current (180 conduction angle)	$T_c=35^{\circ}C$	$I_{T(AV)}$	2.5	A
Non repetitive surge peak on-state current ($T_j=25^{\circ}C$)	$t_p=10ms$	I_{TSM}	30	A
	$t_p=8.3ms$		33	A
I^2t Value for fusing	$t_p=10ms$	I^2t	4.5	A^2s
Peak gate current	$t_p=20\mu s, T_j=110^{\circ}C$	I_{GM}	1.2	A
Average gate power dissipation	$T_j=110^{\circ}C$	$P_{G(AV)}$	0.2	W

ELECTRICAL CHARACTERISTICS(T_j=25℃ unless otherwise specified)

Symbol	Test Condition		JX04XX			Unit
			Min.	Typ.	Max.	
I _{GT}	V _D =6V R _L =100Ω		-	40	200	μA
V _{GT}			-	0.6	0.8	V
V _{GD}	V _D =V _{DRM} R _L =3.3KΩ R _{GK} =1KΩ T _j =110℃		0.2	-	-	V
I _L	I _G =1mA R _{GK} =1KΩ		-	-	6	mA
I _H	I _T =50mA R _{GK} =1KΩ		-	-	5	mA
V _{TM}	I _T =8A t _p =380μs	T _j =25℃	-	1.4	1.8	V
dV/dt	V _D =67%V _{DRM} R _{GK} =1KΩ	T _j =110℃	10	-	-	V/μs
I _{DRM}	V _D =V _{DRM} R _{GK} =1KΩ		T _j =25℃	-	-	5 μA
			T _j =110℃	-	-	0.1 mA
I _{RRM}	V _R =V _{RRM} R _{GK} =1KΩ		T _j =25℃	-	-	5 μA
			T _j =110℃	-	-	0.1 mA

THERMAL RESISTANCES

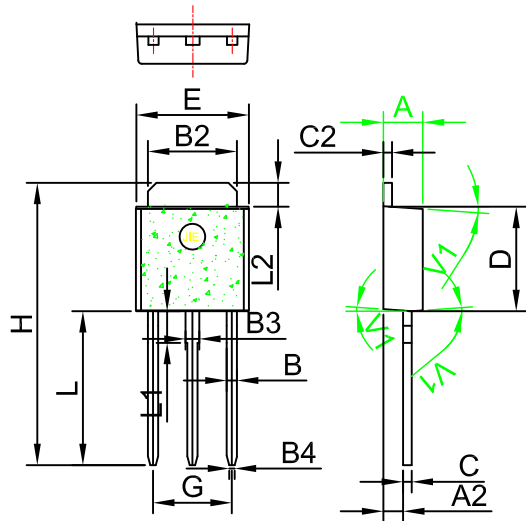
Symbol	Parameter		Value	Unit
R _{th} (J-C)	Junction to Case	IPAK DPAK	2.8	℃/W

ORDERING INFORMATION

J X 04 - 05 Jie Jie Microelectronics CO.,Ltd Highly Sensitive SCRs IGT Class: 03:10-30μA 05:20-50μA 06:30-60μA 08:50-80μA I_T(RMS)=4A	
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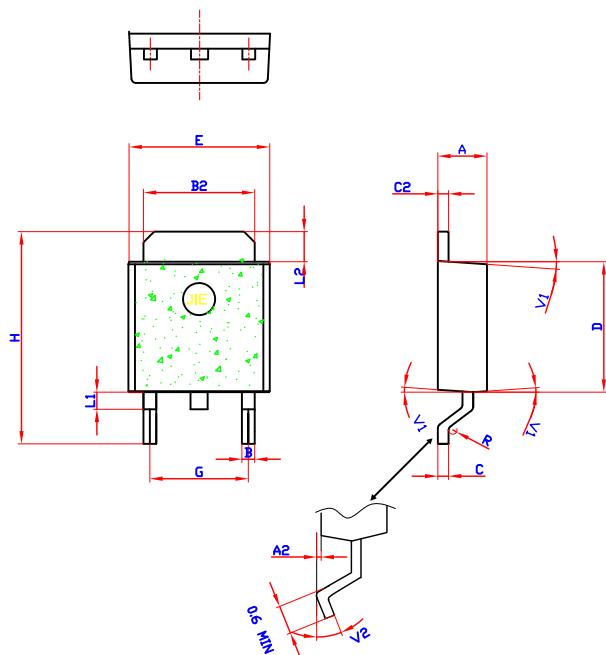
PACKAGE MECHANICAL DATA

iPAK



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.2		2.4	0.086		0.095
A2	0.9		1.1	0.035		0.043
B	0.55		0.65	0.021		0.026
B2	5.2		5.4	0.204		0.212
B3	0.76		0.85	0.030		0.033
B4		0.32			0.013	
C	0.45		0.62	0.017		0.024
C2	0.48		0.62	0.019		0.024
D	6		6.2	0.236		0.244
E	6.4		6.6	0.252		0.260
G	4.4		4.6	0.173		0.181
H	15.9		16.3	0.626		0.641
L	9		9.4	0.354		0.370
L1	1.8		1.9	0.071		0.075
L2	1.37		1.5	0.054		0.059
V1		4°			4°	

DPAK



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.2		2.4	0.086		0.095
A2	0.03		0.23	0.001		0.009
B	0.55		0.65	0.021		0.026
B2	5.2		5.4	0.204		0.212
C	0.45		0.62	0.017		0.024
C2	0.48		0.62	0.019		0.024
D	6		6.2	0.236		0.244
E	6.4		6.6	0.251		0.259
G	4.40		4.60	0.173		0.181
H	9.35		10.1	0.368		0.397
L1		0.8			0.031	
L2	1.37		1.5	0.054		0.059
V1		4°			4°	
V2	0°		8°	0°		8°

FIG.1: Maximum power dissipation versus RMS on-state current(full cycle)

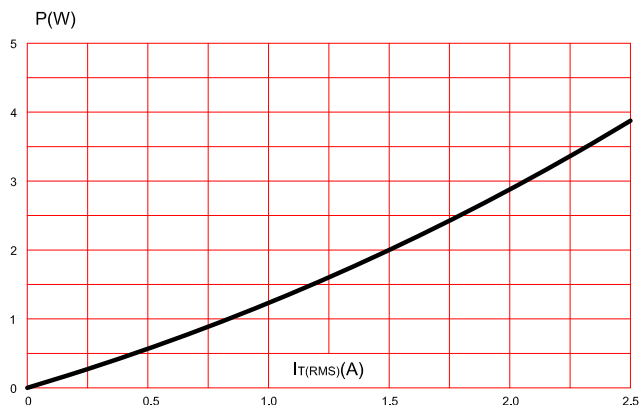


FIG.2: Average on-state current versus case temperature(full cycle)

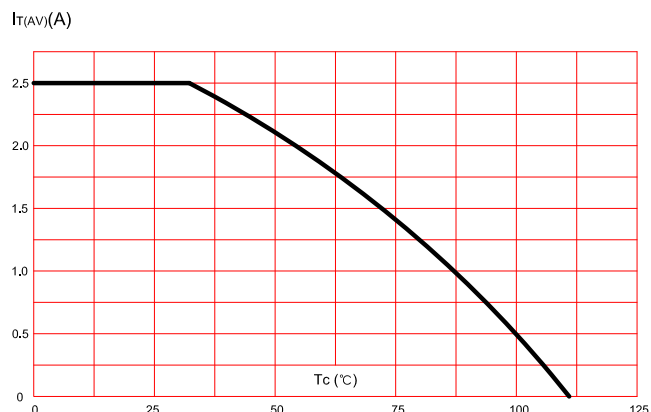


FIG.3: On-state characteristics (maximum values)

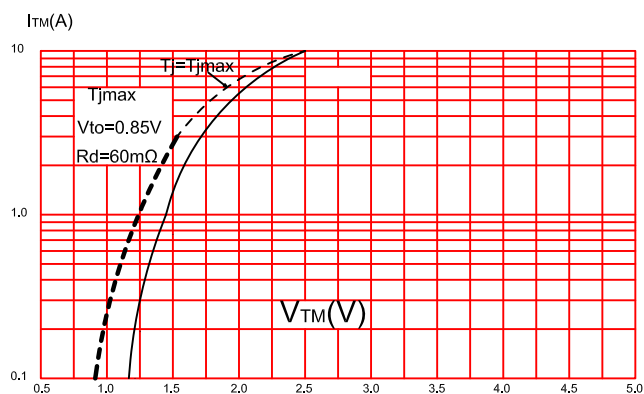


FIG.4: Surge peak on-state current versus number of cycles.

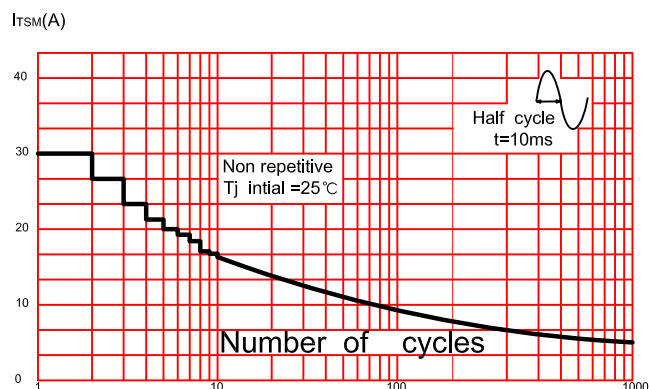
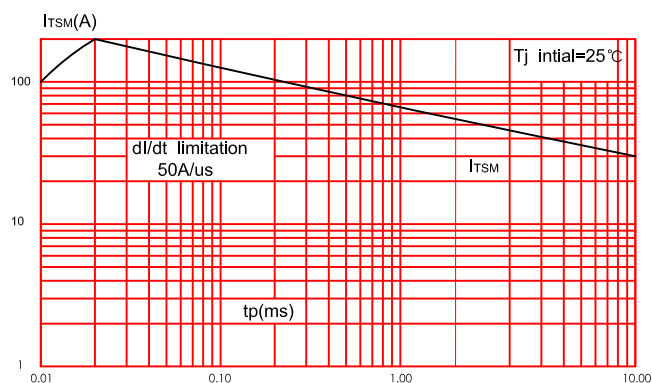
FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10ms$.

FIG.6: Relative variation of gate trigger current, holding current and latching current versus junction temperature(typical values).

