



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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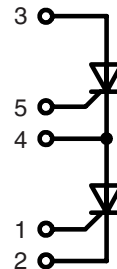


Phase Control Thyristors

-Phaseleg Topology-
in ISOPLUS i4-PAC™

Preliminary Data

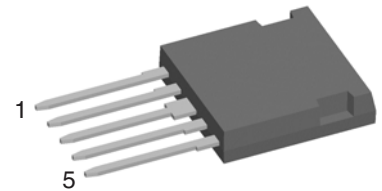
V_{RSM}	V_{RRM}	Type
V_{DSM}	V_{DRM}	
V	V	
1300	1200	FCC 21-12io



$$V_{DRM} = V_{RRM} = 1200 \text{ V}$$

$$I_{T(AV)} = 21 \text{ A}$$

$$I_{TSM} = 300 \text{ A}$$



Thyristors

Symbol	Conditions	Maximum Ratings	
V_{DRM}, V_{RRM}		1200	V
$I_{T(AV)}$	sine 180°; $T_C = 90^\circ\text{C}$	21	A
$I_{T(AV)}$	square; $d = 1/3$; $T_C = 90^\circ\text{C}$	20	A
I_{TSM}	sine 180°; $t = 10 \text{ ms}$; $V_R = 0 \text{ V}$; $T_{VJ} = 25^\circ\text{C}$	300	A
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$ repetitive, $I_T = 40 \text{ A}$ $f = 50 \text{ Hz}$, $t_p = 200 \mu\text{s}$ $V_D = 2/3 V_{DRM}$ $I_G = 0.3 \text{ A}$ non repetitive, $I_T = 30 \text{ A}$ $di_G/dt = 0.3 \text{ A}/\mu\text{s}$	150	A/ μs
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$; $V_{DR} = 2/3 V_{DRM}$ $R_{GK} = \infty$; method 1 (linear voltage rise)	1000	V/ μs

Features

- Thyristor
 - for line frequency
 - chip technology for long term stability
- ISOPLUS i4-PAC™ package
 - isolated back surface
 - UL registered E 72873
 - low coupling capacity between pins and heatsink
 - enlarged creepage towards heatsink
 - application friendly pinout
 - high reliability
 - industry standard outline

Applications

- controlled rectifiers
- power supplies
- drives
- AC switches

Symbol	Conditions	Characteristic Values ($T_{VJ} = 25^\circ\text{C}$, unless otherwise specified)		
		min.	typ.	max.
V_T	$I_T = 30 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$		1.3	V
V_{GT}	$V_D = 6 \text{ V}$			1.4 V
I_{GT}				55 mA
V_{GD}	$T_{VJ} = T_{VJM}$; $V_D = 2/3 V_{DRM}$			0.2 V
I_{GD}				5 mA
I_L	$t_p = 10 \mu\text{s}$; $V_D = 6 \text{ V}$ $I_G = 0.3 \text{ A}$; $di_G/dt = 0.3 \text{ A}/\mu\text{s}$			150 mA
I_H	$V_D = 6 \text{ V}$; $R_{GK} = \infty$			100 mA
t_{gd}	$V_D = 1/2 V_{DRM}$; $V_D = 6 \text{ V}$ $I_G = 0.3 \text{ A}$; $di_G/dt = 0.3 \text{ A}/\mu\text{s}$			2 μs
I_R, I_D	$V_R = V_{RRM}$; $V_D = V_{DRM}$; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$	0.5		50 μA mA
R_{thJC}	DC current			1.0 K/W
R_{thJH}		1.32		K/W

IXYS reserves the right to change limits, test conditions and dimensions.

Component

Symbol	Conditions	Maximum Ratings	
T_{VJ}		-40...+125	°C
T_{stg}		-55...+125	°C
V_{ISOL}	$I_{ISOL} \leq 1 \text{ mA}; 50/60 \text{ Hz}$	2500	V~
F_c	mounting force with clip	20...120	N

Symbol	Conditions	Characteristic Values		
		min.	typ.	max.
C_p	coupling capacity between shorted pins and mounting tab in the case		40	pF
d_s, d_A	pin - pin	1.7		mm
d_s, d_A	pin - backside metal	5.5		mm
Weight			9	g

Dimensions in mm (1 mm = 0.0394")
