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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IXYS **ADVANCE TECHNICAL INFORMATION** **CS 19**

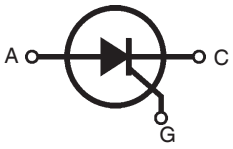
Phase Control Thyristor

V_{RRM} = 800 - 1200 V
$I_{T(RMS)}$ = 35 A
$I_{T(AV)M}$ = 13 A

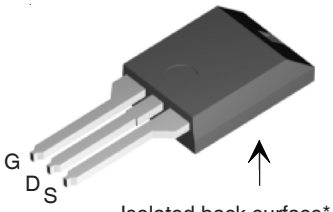
ISOPLUS220™

Electrically Isolated Back Surface

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type
800	800	CS 19-08ho1C
1200	1200	CS 19-12ho1C



ISOPLUS 220™



Isolated back surface*

Symbol	Test Conditions		Maximum Ratings	
$I_{T(RMS)}$	$T_{VJ} = T_{VJM}$		35	A
$I_{T(AV)M}$	T_C = 85°C; 180° sine		13	A
I_{TSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	100	A
	V_R = 0 V	t = 8.3 ms (60 Hz), sine	105	A
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	85	A
	V_R = 0 V	t = 8.3 ms (60 Hz), sine	90	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	50	A^2s
	V_R = 0 V	t = 8.3 ms (60 Hz), sine	45	A^2s
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	36	A^2s
	V_R = 0 V	t = 8.3 ms (60 Hz), sine	33	A^2s
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$	repetitive, I_T = 20 A	100	A/µs
	f = 50 Hz, t_P = 200 µs			
	V_D = 2/3 V_{DRM}			
	I_G = 0.08 A	non repetitive, $I_T = I_{T(AV)M}$	500	A/µs
	di_G/dt = 0.08 A/µs			
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$;	V_{DR} = 2/3 V_{DRM}	500	V/µs
	R_{GK} = ∞; method 1 (linear voltage rise)			
P_{GM}	$T_{VJ} = T_{VJM}$	t_P = 30 µs	5	W
	$I_T = I_{T(AV)M}$	t_P = 300 µs	2.5	W
P_{GAV}			0.5	W
V_{RGM}			10	V
T_{VJ}			-40...+125	°C
T_{VJM}			125	°C
T_{stg}			-40...+125	°C
V_{ISOL}	50/60 Hz RMS; $I_{ISOL} \leq$ 1 mA		2500	V~
T_L	1.6mm from case; 10s		260	°C
F_C	Mounting force		11...65 / 2.4...11	N / lb
Weight			2	g

Features

Features

- Silicon chip on Direct-Copper-Bond substrate
  - High power dissipation
  - Isolated mounting surface
  - 2500V electrical isolation
- Low cathode-to-tab capacitance (15pF typical)
- Planar passivated chips
- Epoxy meets UL 94V-0
- High performance glass passivated chip
- Long-term stability of leakage current and blocking voltage

Applications

- Motor control
- Power converter
- AC power controller
- Light and temperature control
- SCR for inrush current limiting in power supplies or AC drive

Advantages

- Space and weight savings
- Simple mounting

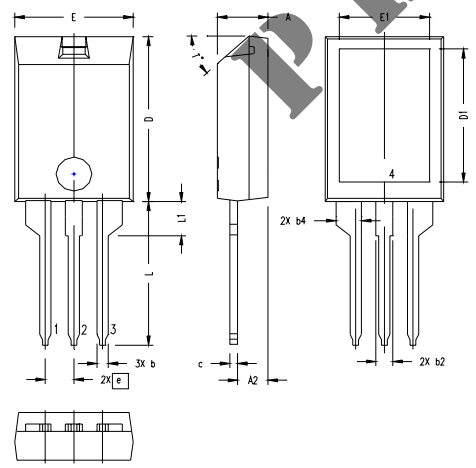
IXYS reserves the right to change limits, conditions and dimensions.

DS98789A(8/03)

Symbol	Test Conditions		Characteristic Values		
I_R, I_D	$T_{VJ} = T_{VJM}$; $V_R = V_{RRM}$; $V_D = V_{DRM}$		≤	1	mA
V_T	I_T = 30 A; T_{VJ} = 25°C		≤	1.65	V
V_{T0}	For power-loss calculations only (T_{VJ} = 125°C)			0.87	V
r_T				29	mΩ
V_{GT}	V_D = 6 V;	T_{VJ} = 25°C	≤	1.5	V
		T_{VJ} = -40°C	≤	2.5	V
I_{GT}	V_D = 6 V;	T_{VJ} = 25°C	≤	25	mA
		T_{VJ} = -40°C	≤	50	mA
V_{GD}	$T_{VJ} = T_{VJM}$;	V_D = 2/3 V_{DRM}	≤	0.2	V
I_{GD}			≤	3	mA
I_L	T_{VJ} = 25°C; t_P = 10 µs I_G =0.08 A; di_G/dt =0.08 A/µs		≤	75	mA
I_H	T_{VJ} = 25°C; V_D = 6 V; R_{GK} = ∞		≤	50	mA
t_{gd}	T_{VJ} = 25°C; V_D = 1/2 V_{DRM} I_G = 0.08 A; di_G/dt = 0.08 A/µs		≤	2	µs

R_{thJC}	DC current		1.7	K/W
R_{thCK}	DC current	typical	0.6	K/W
a	Max. acceleration, 50 Hz		50	m/s^2

ISOPLUS220 OUTLINE



SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.157	.197	4.00	5.00
A2	.098	.118	2.50	3.00
b	.035	.051	0.90	1.30
b2	.049	.065	1.25	1.65
b4	.093	.100	2.35	2.55
c	.028	.039	0.70	1.00
D	.591	.630	15.00	16.00
D1	.472	.512	12.00	13.00
E	.394	.433	10.00	11.00
E1	.295	.335	7.50	8.50
e	.100 BASIC		2.55 BASIC	
L	.512	.571	13.00	14.50
L1	.118	.138	3.00	3.50
T°			42.5°	47.5°

NOTE:
1. Bottom heatsink (Pin 4) is electrically isolated from Pin 1, 2, or 3.
2. This drawing will meet dimensional requirement of JEDEC SS Product Outline TO-273 except D and D1 dimension.