

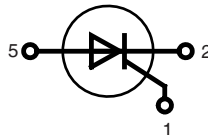
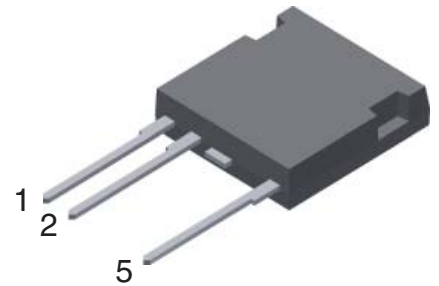
High Voltage Phase Control Thyristor

in High Voltage
ISOPLUS i4-PAC™

$$V_{\text{DRM}} = 2200 \text{ V}$$

$$I_{\text{TSM}} = 200 \text{ A}$$

Part number
CNA30E2200PB



Features / Advantages:

- high voltage thyristor
 - for line frequency
 - chip technology for long term stability
- ISOPLUS i4-PAC™
 - high voltage package
 - isolated back surface
 - enlarged creepage towards heatsink
 - enlarged creepage between high voltage pins
 - application friendly pinout
 - high reliability
 - industry standard outline

Applications:

- controlled rectifiers
 - power supplies
 - drives
- AC switches
- capacitor discharge control
 - flash tubes
 - X-ray and laser generators

Package: i4-Pac

- Isolation Voltage: 3000 V~
- Industry convenient outline
- RoHS compliant
- Epoxy meets UL 94V-0
- Soldering pins for PCB mounting
- Backside: DCB ceramic
- Reduced weight
- Advanced power cycling

Disclaimer Notice

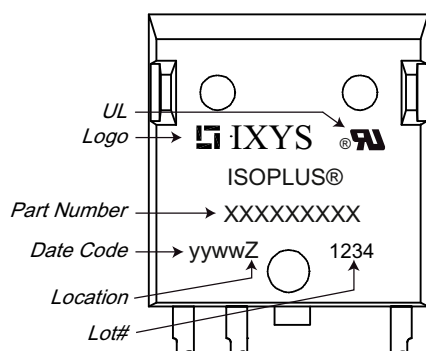
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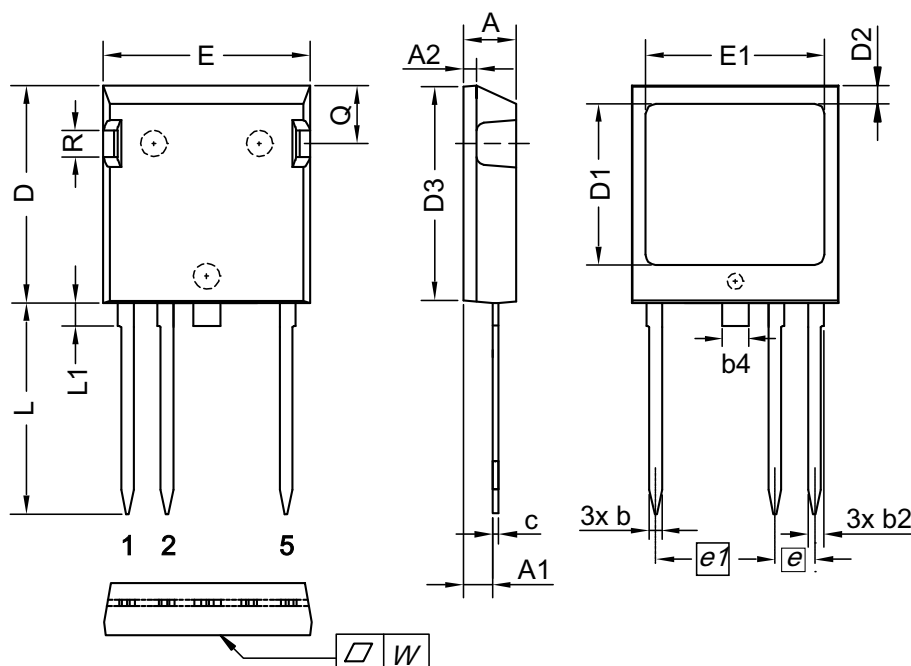
Thyristor				Ratings			
Symbol	Definitions	Conditions		min.	typ.	max.	Unit
V _{DRM}	max. repetitive forward blocking voltage					2200	V
V _{DSM}	max. non-repetitive forward blocking voltage					2300	V
V _{RRM} / RSM	max. repetitive reverse voltage / max. non-repetitive reverse voltage					1650	V
I _{TSM}	max. surge on-state current	sine 180°; t = 10 ms; V _R = 0 V	T _{VJ} = 25°C			200	A
(di/dt) _{cr}	critical rate of rise of current	f = 50 Hz; t _p = 200 μs; V _D = 2000 V di _G /dt = 0.45 A/μs; I _G = 0.45 A non repetitive; I _T = 45 A				150	A/μs
(dv/dt) _{cr}	critical rate of rise of voltage	V _D = 2200 V R _{GK} = ∞; method 1 (linear voltage rise)				5000	V/μs
V _T	forward voltage	I _T = 45 A	T _{VJ} = 25°C			3.0	V
V _{GT} I _{GT}	gate trigger voltage gate trigger current	V _D = 6 V	T _{VJ} = 25°C			2.5 250	V mA
V _{GD} I _{GD}	gate non-trigger voltage gate non-trigger current	V _D = 2/3 V _{DRM}	T _{VJ} = 25°C			0.2 5	V mA
I _L	latching current	t _p = 10 μs; V _D = 6 V I _G = 0.45 A; di _G /dt = 0.45 A/μs				700	mA
I _H	holding current	V _D = 6 V; R _{GK} = ∞	T _{VJ} = 0°C T _{VJ} = 70°C	55		300	mA mA
t _q	turn-off time	I _T = 20 A; t _p = 300 μs; di/dt = -20 A/μs V _R = 10 V; dv/dt = 20 V/μs V _D = 800 V T _{VJ} = 70°C			100		μs
I _{RRM} I _{DRM}	max. repetitive reverse current max. repetitive off-state current	V _R = V _{RRM} ; V _D = V _{DRM} T _{VJ} = 25°C T _{VJ} = 70°C				50 200	μA μA
I _{DSM} / RSM	max. single pulse reverse current	V _R = V _{RSM} ; V _D = V _{DSM} T _{VJ} = 70°C				2	mA

Package	I4-Pac		Ratings			
Symbol	Definitions	Conditions	min.	typ.	max.	Unit
I_{RMS}	<i>RMS current</i>	per terminal			70	A
T_{VJ}	<i>virtual junction temperature</i>		-40		70	°C
T_{op}	<i>operation temperature</i>		-40		70	°C
T_{stg}	<i>storage temperature</i>		-40		70	°C
Weight				5.5		g
F_C	<i>mounting force with clip</i>		20		120	N
$d_{Spp/App}$ $d_{Spb/Appb}$	<i>creepage distance on surface striking distance through air</i>	terminal to terminal terminal to backside	7.2 5.1			mm mm
V_{ISOL}	<i>isolation voltage</i>	t = 1 second	3000			V
		t = 1 minute	2500			V

Product Marking



Dimensions in mm (1 mm = 0.0394")



Dim.	Millimeter		Inches	
	min	max	min	max
A	4.83	5.21	0.190	0.205
A1	2.59	3.00	0.102	0.118
A2	1.17	2.16	0.046	0.085
b	1.14	1.40	0.045	0.055
b2	1.47	1.73	0.058	0.068
b4	2.54	2.79	0.100	0.110
c	0.51	0.74	0.020	0.029
D	20.80	21.34	0.819	0.840
D1	14.99	15.75	0.590	0.620
D2	1.65	2.03	0.065	0.080
D3	20.30	20.70	0.799	0.815
E	19.56	20.29	0.770	0.799
E1	16.76	17.53	0.660	0.690
e	3.81 BSC		0.150 BSC	
e1	11.43 BSC		0.450 BSC	
L	19.81	21.34	0.780	0.840
L1	2.11	2.59	0.083	0.102
Q	5.33	6.20	0.210	0.244
R	2.54	4.57	0.100	0.180
W	-	0.10	-	0.004

Die konvexe Form des Substrates ist typ. < 0.05 mm über der Kunststoffoberfläche der Bauteilunterseite
The convex bow of substrate is typ. < 0.05 mm over plastic surface level of device bottom side