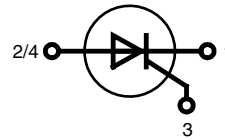


# High Voltage Phase Control Thyristor

$$V_{\text{DRM}} = 2500 \text{ V}$$

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


**TO-268 AA (D<sup>3</sup>Pak)**


4 = Backside = Anode

Thyristor				
Symbol	Conditions	Maximum Ratings		
$V_{\text{DRM}}$		2500	V	
$V_{\text{DSM}}$		2500	V	
$V_{\text{RRM}} / \text{RSM}$		1650	V	
$I_{\text{TSM}}$	sine 180°; t = 10 ms; $V_{\text{R}} = 0 \text{ V}$ ; $T_{\text{VJ}} = 25^\circ\text{C}$	200	A	
$(di/dt)_{\text{cr}}$	f = 50 Hz; $t_{\text{p}} = 200 \mu\text{s}$ ; $V_{\text{D}} = 2000 \text{ V}$ $di_{\text{G}}/dt = 0.45 \text{ A}/\mu\text{s}$ ; $I_{\text{G}} = 0.45 \text{ A}$ non repetitive; $I_{\text{T}} = 45 \text{ A}$	150	A/ $\mu\text{s}$	
$(dv/dt)_{\text{cr}}$	$V_{\text{D}} = 2200 \text{ V}$ $R_{\text{GK}} = \infty$ ; method 1 (linear voltage rise)	5000	V/ $\mu\text{s}$	
Symbol	Conditions	Characteristic Values		
		min.	max.	
$V_{\text{T}}$	$I_{\text{T}} = 45 \text{ A}$ $T_{\text{VJ}} = 25^\circ\text{C}$		3.0	V
$V_{\text{GT}}$	$V_{\text{D}} = 6 \text{ V}$ $T_{\text{VJ}} = 25^\circ\text{C}$		2.5	V
$I_{\text{GT}}$			250	mA
$V_{\text{GD}}$	$V_{\text{D}} = \frac{2}{3} V_{\text{DRM}}$ $T_{\text{VJ}} = 25^\circ\text{C}$		0.2	V
$I_{\text{GD}}$			5	mA
$I_{\text{L}}$	$t_{\text{p}} = 10 \mu\text{s}$ ; $V_{\text{D}} = 6 \text{ V}$ $I_{\text{G}} = 0.45 \text{ A}$ ; $di_{\text{G}}/dt = 0.45 \text{ A}/\mu\text{s}$ $T_{\text{VJ}} = 0^\circ\text{C}$		700	mA
$I_{\text{H}}$	$V_{\text{D}} = 6 \text{ V}$ ; $R_{\text{GK}} = \infty$ $T_{\text{VJ}} = 0^\circ\text{C}$ $T_{\text{VJ}} = 70^\circ\text{C}$	55	300	mA mA
$t_{\text{q}}$	$I_{\text{T}} = 20 \text{ A}$ ; $t_{\text{p}} = 300 \mu\text{s}$ ; $di/dt = -20 \text{ A}/\mu\text{s}$ $V_{\text{R}} = 10 \text{ V}$ ; $dv/dt = 20 \text{ V}/\mu\text{s}$ $V_{\text{D}} = 800 \text{ V}$ $T_{\text{VJ}} = 70^\circ\text{C}$		100	$\mu\text{s}$
$I_{\text{RRM}} / \text{DRM}$	$V_{\text{R}} = V_{\text{RRM}}$ ; $V_{\text{D}} = V_{\text{DRM}}$ $T_{\text{VJ}} = 25^\circ\text{C}$ $T_{\text{VJ}} = 70^\circ\text{C}$		50	$\mu\text{A}$
			200	$\mu\text{A}$
$I_{\text{DSM}} / \text{RSM}$	$V_{\text{R}} = V_{\text{RSM}}$ ; $V_{\text{D}} = V_{\text{DSM}}$ $T_{\text{VJ}} = 70^\circ\text{C}$		2	mA
$R_{\text{thJC}}$			0.80	K/W

**Features**

- high voltage thyristor
  - for line frequency
  - chip technology for long term stability
  - planar glass passivated
- International standard package  
JEDEC TO-268
- Epoxy meets UL 94V-0

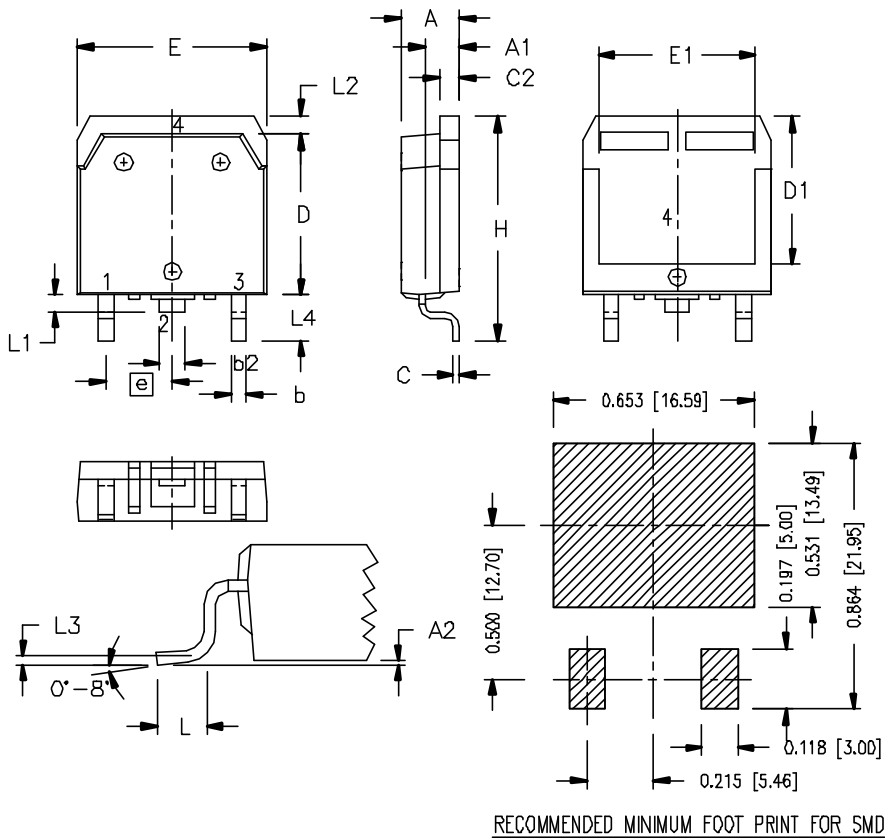
**Applications**

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

Component			
Symbol	Conditions	Maximum Ratings	
$T_{VJ}$		-10 ... +70	°C
$T_{stg}$		-40 ... +70	°C
$F_c$	Mounting force with clip	20...120	N

Symbol	Conditions	Characteristic Values		
		min.	typ.	max.
$R_{thCH}$	with heatsink compound		0.15	
<b>Weight</b>			5	



Dim.	Millimeter		Inches	
	min	max	min	max
A	4.90	5.10	0.193	0.201
A1	2.70	2.90	0.106	0.114
A2	0.02	0.25	0.001	0.100
b	1.15	1.45	0.045	0.057
b2	1.90	2.10	0.075	0.083
C	0.40	0.65	0.016	0.026
C2	1.45	1.60	0.057	0.063
D	13.80	14.00	0.543	0.551
D1	12.40	12.70	0.488	0.500
E	15.85	16.05	0.624	0.632
E1	13.30	13.60	0.524	0.535
e	5.45 BSC		0.215 BSC	
H	18.70	19.10	0.736	0.752
L	2.40	2.70	0.094	0.106
L1	1.20	1.40	0.047	0.055
L2	1.00	1.15	0.039	0.045
L3	0.25 BSC		0.100 BSC	
L4	3.80	4.10	0.150	0.161