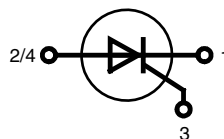


High Voltage Phase Control Thyristor

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

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


TO-268 AA (D³Pak)


4 = Backside = Anode

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

Features

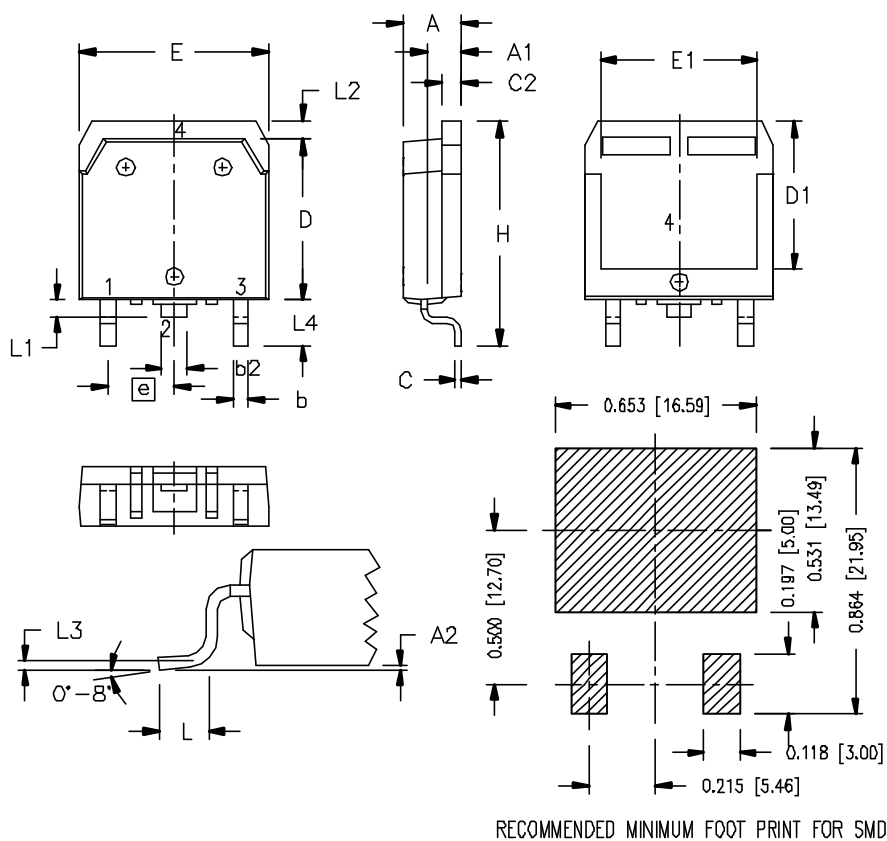
- high voltage thyristor
 - for line frequency
 - chip technology for long term stability
 - planar glass passivated
- International standard package
JEDEC TO-268
- Epoxy meets UL 94V-0

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		K/W
Weight			5		g



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