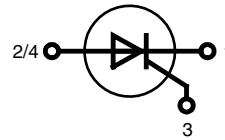
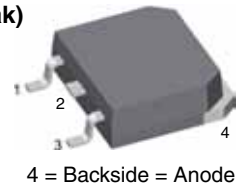


High Voltage Phase Control Thyristor

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

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


TO-268 AA (D³Pak)


| 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 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/ 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} I_{GT} | $V_{\text{D}} = 6 \text{ V}$ $T_{\text{VJ}} = 25^\circ\text{C}$ | | 2.5 V 250 mA |
| V_{GD} I_{GD} | $V_{\text{D}} = \frac{2}{3} V_{\text{DRM}}$ $T_{\text{VJ}} = 25^\circ\text{C}$ | | 0.2 V 5 mA |
| I_{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_{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} | $I_{\text{T}} = 20 \text{ A}$; $t_{\text{p}} = 300 \mu\text{s}$; $di/dt = -20 \text{ A}/\mu\text{s}$ $V_{\text{R}} = 10 \text{ V}$; $dv/dt = 20 \text{ V}/\mu\text{s}$ $V_{\text{D}} = 800 \text{ V}$ $T_{\text{VJ}} = 70^\circ\text{C}$ | | 100 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 μA 200 μA |
| $I_{\text{DSM}} / \text{RSM}$ | $V_{\text{R}} = V_{\text{RSM}}$; $V_{\text{D}} = V_{\text{DSM}}$ $T_{\text{VJ}} = 70^\circ\text{C}$ | | 2 mA |
| R_{thJC} | | | 0.80 K/W |

Features

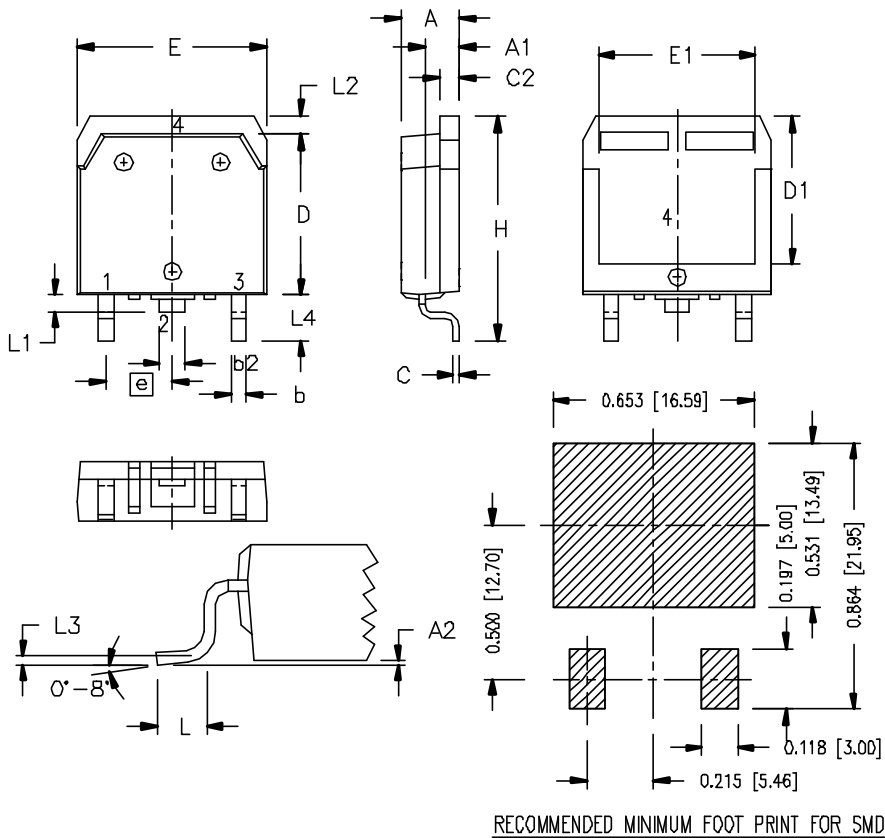
- high voltage thyristor
 - for line frequency
 - chip technology for long term stability
 - planar glass passivated
- International standard package
JEDEC TO-268
- Epoxy meets UL 94V-0

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 | |
| Weight | | | 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 |

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