H Series TRIACs
High application robustness
150°C TRIACs

High performance, high temperature TRIACs for HVAC* and motor control

The H Series TRIACs offer a junction temperature of 150°C. They are suited to hot environments and to PCB designs requiring high power density. With a current rating up to 30 A, they are available in D²PAK and TO-220 packages. These devices offer high thermal cycling performance and high turn-off commutation capability. They are the TRIACs for the most rugged environments in the industry.

**KEY FEATURES**

High thermal cycling stability
- 150 °C operating junction temperature
- High turn-off performance
- High noise immunity
- Logic level gates available
- Surface mount design compatible (D²PAK)

**KEY BENEFITS**

Reliable and compact
- High reliability
- Heatsink reduction
- Adapted to dense or harsh operating conditions without snubber
- Compatible with closed ambient applications
- 10 mA for direct drive from MCU
- More compact design

**CERTIFICATIONS**
- UL 1557 @ 2500 V (TO-220AB Ins.)
- UL-94-V0 (flammability)
- Halogen-free and RoHS compliant

**KEY APPLICATIONS**
- Industrial automation
- Heating
- Motor soft starters
- Inrush current limiters for motor drives
- Home appliances
- Coffee machines
- Vacuum cleaners
- HVACs*
- Power tools
- Home automation
- Fan control
- Lighting
- Door/curtain/awning motors
- Power management
- Hi-rel server UPS

* Heating, Ventilation and Air Conditioning

www.st.com/thyristors
H SERIES TRIACS: THE COMPACT CHOICE FOR HEAVY LOADS

**BETTER PERFORMANCE**

ST H Series TRIAC

Standard TRIAC

Increased thermal robustness and lower power dissipation

**COMPACT DESIGN**

**Reduced heatsink**

Thanks to its high junction temperature rating, the heatsink size may be reduced.

Using H Series TRIACS can reduce the heatsink size by 50% compared to standard TRIACS for the same load.

**Surface mount devices**

H Series TRIACs are available in the surface mount D2PAK package. It is compatible with automatic assembly lines.

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**H SERIES TRIACS PRODUCT TABLE**

Naming scheme example:

```
TRIAC (16A) I_{PRM0}
(35mA) I_{ST}
```

<table>
<thead>
<tr>
<th>Package</th>
<th>I_{PRM0}</th>
<th>V_{INN},V_{MIN}</th>
<th>I_{ST}</th>
<th>dV/dt</th>
<th>(dI/dt)_{c}</th>
<th>T_{J}</th>
</tr>
</thead>
<tbody>
<tr>
<td>TO-220AB</td>
<td>Max.</td>
<td>V</td>
<td>mA</td>
<td>V/µs @ 150 °C</td>
<td>A/µs @ 10 V/µs @ 150 °C</td>
<td>°C</td>
</tr>
<tr>
<td>TO-220AB Ins.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D2PAK</td>
<td>Max.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Logic Level Gate TRIACS**

- **T410H-6**: T 4 600 10 75 1.5 150
- **T610H-6**: T 6 600 10 75 2.3 150
- **T810H-6**: T G 8 600 10 75 3 150
- **T1010H-6**: T G 10 600 10 75 3.8 150
- **T1610H-6**: T G 16 600 10 100 3 150

**Standard Gate, Snubberless™ TRIACs**

- **T835H-6**: T I G 8 600 35 1000 11 150
- **T850H-6**: T I G 8 600 50 1500 14 150
- **T1035H-6**: T I G 10 600 35 1000 13 150
- **T1050H-6**: T I G 10 600 50 1500 18 150
- **T1235H-6**: T I G 12 600 35 1000 16 150
- **T1250H-6**: T I G 12 600 50 1500 21 150
- **T1635H-6**: T I G 16 600 35 1000 21 150
- **T1650H-6**: T I G 16 600 50 1500 28 150
- **T2035H-6**: T I G 20 600 35 1000 27 150
- **T2050H-6**: T I G 20 600 50 1500 36 150
- **T3035H-6**: T I G 30 600 35 1000 33 150
- **T3050H-6**: T I G 30 600 50 1500 44 150

**NB:** Surge voltage V_{DSM},V_{RSM} = V_{DRM},V_{RRM} + 100V