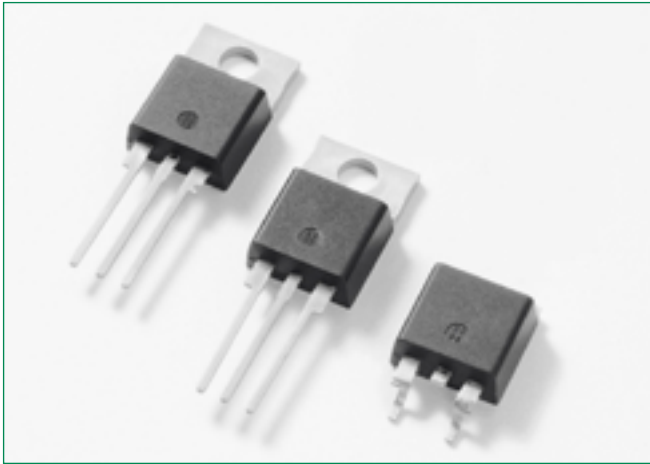


# QJxx10xHx and QJxx10xx Series

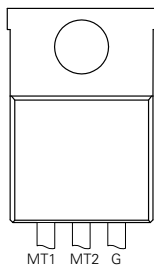
## 10 A High Temperature Alternistor and Standard (High Communication) TRIACs

RoHS

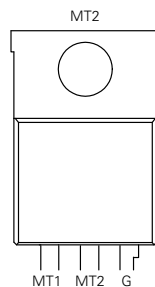


### Pinout Diagram

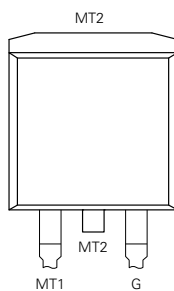
TO-220AB (L-Package)



TO-220AB (R-Package)



TO-263AB



**MT1:** Main Terminal 1; **MT2:** Main Terminal 2; **G:** Gate

### Description

This 10 A high temperature Alternistor and Standard TRIAC series, offered in TO-220AB, TO-220 isolated, and TO-263 packages, has 150°C maximum junction temperature and 120 A  $I_{TSM}$  (60 Hz).

This series enables easier thermal management and higher surge handling capability in AC power control applications such as heater control, motor speed control, lighting controls, and static switching relays. Alternistor TRIAC operates in Quadrants I, II, and III, and offers high performance in applications requiring high commutation capability.

### Features

- Recognized to UL 1557 as an Electrically Isolated Semiconductor Device
- Glass-passivated junctions
- Surge capability up to 120 A and 60 Hz
- L package UL recognized under E71639 for Electrical isolated at 2500 V<sub>RMS</sub>
- No contacts to wear out from reaction of switching events
- Solid-state switching eliminates arcing or contact bounce that creates voltage transients
- Restricted (or limited) RFI generation, depending on activation point sine wave
- Requires only a small gate activation pulse in each half-cycle
- RoHS compliant

### Applications

- Excellent for AC switching and phase control applications such as heating, lighting, and motor speed controls. Typical applications are AC solid-state switches, light dimmers, power tools, lawn care equipment, home/brown goods, and white goods appliances.
- Alternistor TRIACs (no snubber required) are used in applications with extremely inductive loads requiring highest commutation performance.
- Internally constructed isolated packages are offered for ease of heat sinking with highest isolation voltage.
- Standard type devices normally operate in Quadrants I & III triggered from AC line.

### Product Summary

| Characteristic    | Value      | Unit |
|-------------------|------------|------|
| $I_{T(RMS)}$      | 10         | A    |
| $V_{DRM}/V_{RRM}$ | 600 or 800 | V    |
| $I_{GT}(Q1)$      | 10 to 50   | mA   |

# QJxx10xHx and QJxx10xx Series

## 10 A High Temperature Alternistor and Standard (High Communication) TRIACs

### Maximum Ratings — Alternistor TRIAC (3 Quadrants)

| Symbol            | Parameter                                                                                          | Value                                                   | Unit                    |
|-------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------|
| $I_{T(RMS)}$      | RMS on-state current (full sine wave)                                                              | QJxx10LHy $T_c = 120^\circ\text{C}$                     | 10                      |
|                   |                                                                                                    | QJxx10RHy<br>QJxx10NHx $T_c = 130^\circ\text{C}$        |                         |
| $I_{TSM}$         | Non repetitive surge peak on-state current<br>(full cycle, $T_{VJ}$ initial = $25^\circ\text{C}$ ) | f = 50 Hz, t = 20 ms                                    | 100                     |
|                   |                                                                                                    | f = 60 Hz, t = 16.7 ms                                  | 120                     |
| $I^2t$            | $I^2t$ Value for fusing                                                                            | $t_p = 8.3$ ms                                          | 60                      |
| di/dt             | Critical rate of rise of on-state current                                                          | f = 60 Hz, $T_{VJ} = 150^\circ\text{C}$                 | 70                      |
| $I_{GTM}$         | Peak gate trigger current                                                                          | $t_p = 20$ $\mu\text{s}$ , $T_{VJ} = 150^\circ\text{C}$ | 4                       |
| $P_{G(AV)}$       | Average gate power dissipation                                                                     | $T_{VJ} = 150^\circ\text{C}$                            | 0.5                     |
| $T_{stg}$         | Storage temperature range                                                                          | -                                                       | -40 to 150              |
| $T_{VJ}$          | Operating junction temperature range                                                               | -                                                       | -40 to 150              |
| $V_{DSM}/V_{RSM}$ | Peak Non-repetitive Blocking Voltage                                                               | Pulse Width = 100 $\mu\text{s}$ 600 V                   | $V_{DRM}/V_{RRM} + 100$ |
|                   |                                                                                                    | 800 V                                                   | $V_{DRM}/V_{RRM} + 200$ |

### Maximum Ratings — Standard TRIAC

| Symbol            | Parameter                                                                                           | Value                                                   | Unit                      |
|-------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------|
| $V_{DSM}/V_{RSM}$ | Peak non-repetitive blocking voltage                                                                | Pulse Width = 100 $\mu\text{s}$ 600 V                   | $V_{DRM}/V_{RRM} + 100$ V |
|                   |                                                                                                     | 800 V                                                   | $V_{DRM}/V_{RRM} + 200$ V |
| $I_{T(RMS)}$      | RMS on-state current (full sine wave)                                                               | QJxx10Ly $T_c = 120^\circ\text{C}$                      | 10                        |
|                   |                                                                                                     | QJxx10Ry/QJxx10Ny $T_c = 130^\circ\text{C}$             |                           |
| $I_{TSM}$         | Non repetitive surge peak on-state current<br>(full cycle, $T_{VJ}$ initial = $25^\circ\text{C}$ )  | f = 50 Hz, t = 20 ms                                    | 100                       |
|                   |                                                                                                     | f = 60 Hz, t = 16.7 ms                                  | 120                       |
| $I^2t$            | $I^2t$ Value for fusing                                                                             | $t_p = 8.3$ ms                                          | 60                        |
| di/dt             | Critical rate of rise of on-state current<br>$I_G = 200$ mA with $\leq 0.1$ $\mu\text{s}$ rise time | f = 60 Hz, $T_{VJ} = 150^\circ\text{C}$                 | 70                        |
| $I_{GTM}$         | Peak gate trigger current                                                                           | $t_p = 20$ $\mu\text{s}$ , $T_{VJ} = 150^\circ\text{C}$ | 4                         |
| $P_{G(AV)}$       | Average gate power dissipation                                                                      | $T_{VJ} = 150^\circ\text{C}$                            | 0.5                       |
| $T_{stg}$         | Storage temperature range                                                                           | -                                                       | -40 to 150                |
| $T_{VJ}$          | Operating junction temperature range                                                                | -                                                       | -40 to 150                |

Note: xx=voltage/10, x=package, y=sensitivity

### Thermal Characteristics

| Symbol     | Parameter                                    | Value                                    | Unit |
|------------|----------------------------------------------|------------------------------------------|------|
| $R_{thJC}$ | Thermal Resistance, junction-to-case (AC)    | QJxx10RHy/QJxx10NHx<br>QJxx10Ry/QJxx10Ny | 1.2  |
|            |                                              | QJxx10LHy/QJxx10Ly                       | 2.3  |
| $R_{thJA}$ | Thermal Resistance, junction-to-ambient (AC) | QJxx10RHy/QJxx10Ry                       | 45   |
|            |                                              | QJxx10LHy/QJxx10Ly                       | 90   |

# QJxx10xHx and QJxx10xx Series

## 10 A High Temperature Alternistor and Standard (High Communication) TRIACs

### Electrical Characteristics ( $T_{VJ} = 25^{\circ}\text{C}$ , unless otherwise specified) — Alternistor TRIAC (3 Quadrants)

| Symbol               | Description                                | Conditions                                                                                 |          | QJxx10xH3 |     |     | QJxx10xH4 |     |     | QJxx10xH5 |     |     | Unit |
|----------------------|--------------------------------------------|--------------------------------------------------------------------------------------------|----------|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|------|
|                      |                                            |                                                                                            |          | MIN       | TYP | MAX | MIN       | TYP | MAX | MIN       | TYP | MAX |      |
| I <sub>GT</sub>      | DC Gate Trigger Current                    | V <sub>D</sub> = 12 V, R <sub>L</sub> = 60 Ω                                               | I-II-III | -         | -   | 10  | -         | -   | 35  | -         | -   | 50  | mA   |
| V <sub>GT</sub>      | DC Gate Trigger Voltage                    | V <sub>D</sub> = 12 V, R <sub>L</sub> = 60 Ω                                               | I-II-III | -         | -   | 1.3 | -         | -   | 1.3 | -         | -   | 1.3 | V    |
| V <sub>GD</sub>      | Gate Non-trigger Voltage                   | V <sub>D</sub> = V <sub>DRM</sub> , R <sub>L</sub> = 3.3 kΩ, T <sub>VJ</sub> = 150 °C      | I-II-III | 0.2       | -   | -   | 0.2       | -   | -   | 0.2       | -   | -   | V    |
| I <sub>H</sub>       | Holding Current                            | I <sub>T</sub> = 100 mA                                                                    |          | -         | -   | 15  | -         | -   | 40  | -         | -   | 50  | mA   |
| dv/dt                | Critical Rate-of-rise of Off-stage Voltage | V <sub>D</sub> = V <sub>DRM</sub> , Gate Open, T <sub>VJ</sub> = 150 °C                    | 600 V    | 100       | -   | -   | 250       | -   | -   | 350       | -   | -   | V/μs |
|                      |                                            |                                                                                            | 800 V    | 150       | -   | -   | 450       | -   | -   | 700       | -   | -   |      |
|                      |                                            | V <sub>D</sub> = 2/3 V <sub>DRM</sub> , Gate Open, T <sub>VJ</sub> = 150 °C                | 600 V    | 150       | -   | -   | 300       | -   | -   | 500       | -   | -   |      |
|                      |                                            |                                                                                            | 800 V    | 200       | -   | -   | 600       | -   | -   | 1000      | -   | -   |      |
| (dv/dt) <sub>c</sub> |                                            | (di/dt) <sub>c</sub> = 6.5 A/ms, T <sub>VJ</sub> = 150 °C                                  |          | 10        | -   | -   | 20        | -   | -   | 30        | -   | -   | V/μs |
| t <sub>ot</sub>      | Turn-on Time                               | I <sub>G</sub> = 2 × I <sub>GT</sub> , P <sub>W</sub> = 15 μs, I <sub>T</sub> = 14.1 A(pk) |          | -         | 4   | -   | -         | -   | 7   | -         | -   | 9   | -    |

### Electrical Characteristics ( $T_{VJ} = 25^{\circ}\text{C}$ , unless otherwise specified) — Standard TRIAC

| Symbol               | Description                                | Conditions                                                                              | Quadrant     |      | Value   |         | Unit |
|----------------------|--------------------------------------------|-----------------------------------------------------------------------------------------|--------------|------|---------|---------|------|
|                      |                                            |                                                                                         |              |      | Qxx10x4 | Qxx10x5 |      |
| I <sub>GT</sub>      | DC Gate Trigger Current                    | V <sub>D</sub> = 12 V R <sub>L</sub> = 60 Ω                                             | I – II – III | MAX. | 25      | 50      | mA   |
|                      |                                            |                                                                                         | IV           | TYP. | 50      | 75      |      |
| V <sub>GT</sub>      | DC Gate Trigger Voltage                    | V <sub>D</sub> = 12 V R <sub>L</sub> = 60 Ω                                             | ALL          | MAX. | 1.3     |         | V    |
| V <sub>GD</sub>      | Gate Non-trigger Voltage                   | V <sub>D</sub> = V <sub>DRM</sub> R <sub>L</sub> = 3.3 kΩ T <sub>VJ</sub> = 150°C       | ALL          | MIN. | 0.2     |         | V    |
| I <sub>H</sub>       | Holding Current                            | I <sub>T</sub> = 100 mA                                                                 |              | MAX. | 35      | 50      | mA   |
| dv/dt                | Critical Rate-of-rise of Off-stage Voltage | V <sub>D</sub> = V <sub>DRM</sub> Gate Open T <sub>VJ</sub> = 150°C                     | 600 V        | MIN. | 400     | 800     | V/μs |
|                      |                                            |                                                                                         | 800 V        |      | 600     | 1000    |      |
|                      |                                            | V <sub>D</sub> = 2/3 V <sub>DRM</sub> Gate Open T <sub>VJ</sub> = 150°C                 | 600 V        |      | 600     | 1000    |      |
|                      |                                            |                                                                                         | 800 V        |      | 800     | 1200    |      |
| (dv/dt) <sub>c</sub> |                                            | (di/dt) <sub>c</sub> = 6.5 A/ms T <sub>VJ</sub> = 150°C                                 |              | TYP. | 3       | 4       | V/μs |
| t <sub>gt</sub>      | Turn-on Time                               | I <sub>G</sub> = 2 x I <sub>GT</sub> P <sub>W</sub> = 15 μs I <sub>T</sub> = 14.1 A(pk) | I – II – III | TYP. | 1-2-6   | 1-2-6   | μs   |
|                      |                                            |                                                                                         | IV           |      | 10      | 11      |      |

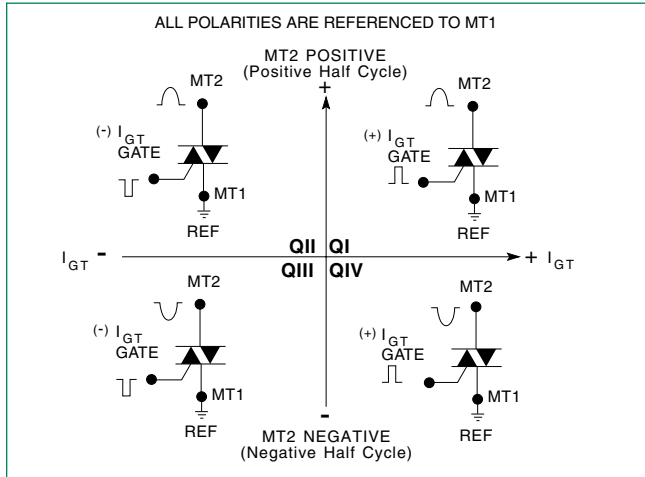
### Static Characteristics

| Symbol            | Description                        | Conditions                                                 | Maximum Value | Unit          |
|-------------------|------------------------------------|------------------------------------------------------------|---------------|---------------|
| $V_{TM}$          | Peak On-state Voltage              | $I_{TM} = 14.1\text{ A}$ , $t_p = 380\ \mu\text{s}$        | 1.60          | V             |
| $I_{DRM}/I_{RRM}$ | Off-state Current, Peak Repetitive | $V_D = V_{DRM} = V_{RRM}$ , $T_{VJ} = 25^{\circ}\text{C}$  | 10            | $\mu\text{A}$ |
|                   |                                    | $V_D = V_{DRM} = V_{RRM}$ , $T_{VJ} = 150^{\circ}\text{C}$ | 4             | mA            |

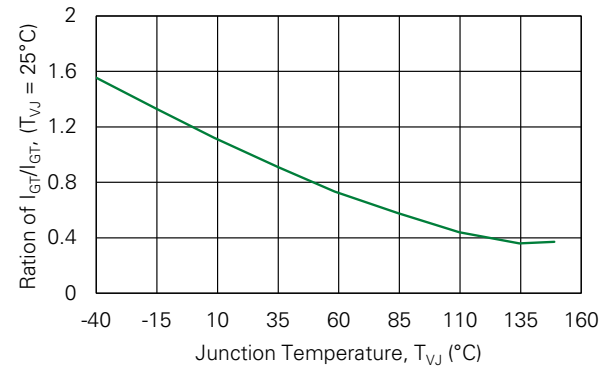
# QJxx10xHx and QJxx10xx Series

## 10 A High Temperature Alternistor and Standard (High Communication) TRIACs

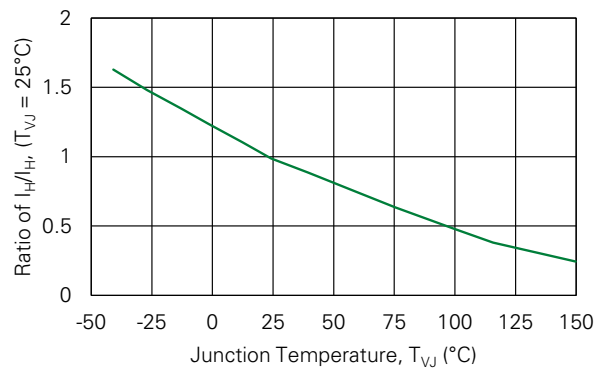
**Figure 1: Definition of Quadrants**



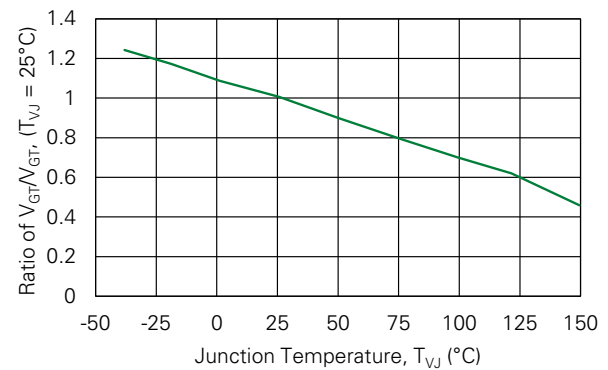
**Figure 2: Normalized DC Gate Trigger Current for all Quadrants vs. Junction Temperature**



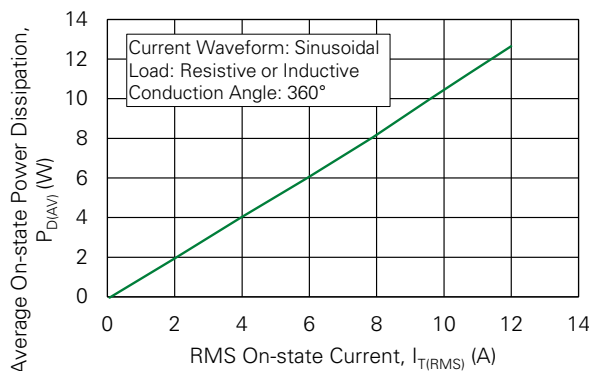
**Figure 3: Normalized DC Holding Current vs. Junction Temperature**



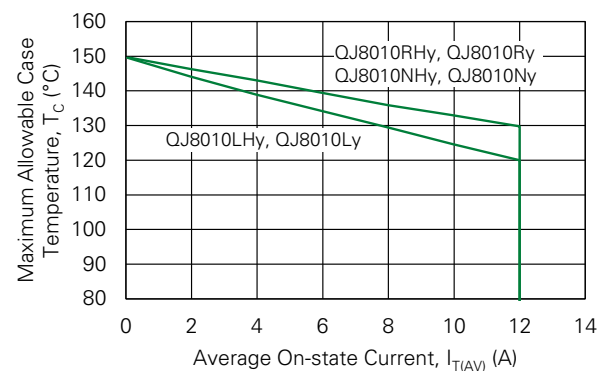
**Figure 4: Normalized DC Gate Trigger Voltage for all Quadrants vs. Junction Temperature**



**Figure 5: Typical Power Dissipation vs. RMS On-state Current**



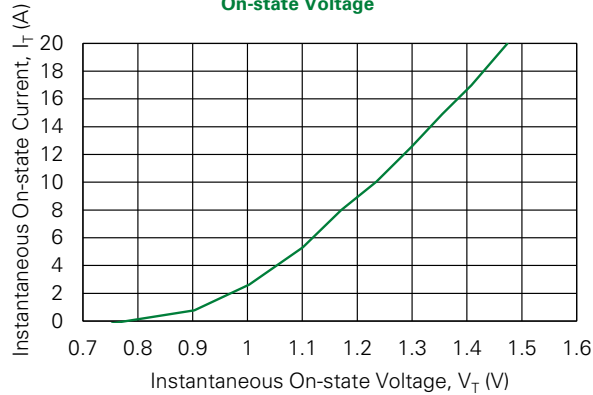
**Figure 6: Maximum Allowable Case Temperature vs. On-state Current**



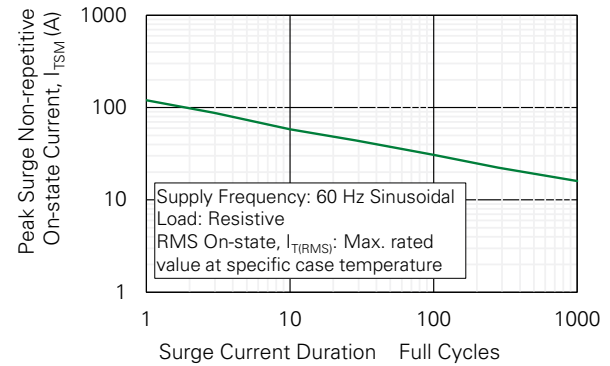
# QJxx10xHx and QJxx10xx Series

## 10 A High Temperature Alternistor and Standard (High Communication) TRIACs

**Figure 7. Typical On-state Current vs. On-state Voltage**



**Figure 8. Surge Peak On-state Current vs. Number of Cycles**



**Notes:**

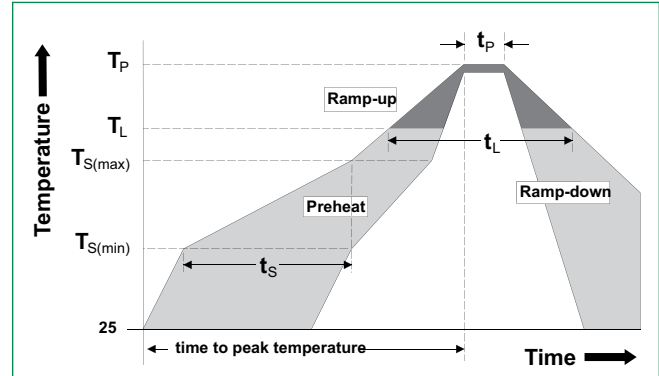
1. Gate control may be lost during and immediately following surge current interval.
2. Overload may not be repeated until junction temperature has returned to steady-state rated value

# QJxx10xHx and QJxx10xx Series

## 10 A High Temperature Alternistor and Standard (High Communication) TRIACs

### Soldering Parameters

|                                                                        |                                    |                      |
|------------------------------------------------------------------------|------------------------------------|----------------------|
| <b>Reflow Condition</b>                                                |                                    | Pb – Free assembly   |
| <b>Pre Heat</b>                                                        | - Temperature Min ( $T_{s(min)}$ ) | 150°C                |
|                                                                        | - Temperature Max ( $T_{s(max)}$ ) | 200°C                |
|                                                                        | - Time (min to max) ( $t_s$ )      | 60 to 180 s          |
| <b>Average ramp up rate (Liquidus Temp) (<math>T_L</math>) to peak</b> |                                    | 5°C/second max       |
| <b><math>T_{s(max)}</math> to <math>T_L</math> - Ramp-up Rate</b>      |                                    | 5°C/second max       |
| <b>Reflow</b>                                                          | - Temperature ( $T_L$ ) (Liquidus) | 217°C                |
|                                                                        | - Time (min to max) ( $t_r$ )      | 60 to 150 seconds    |
| <b>Peak Temperature (<math>T_p</math>)</b>                             |                                    | 260 °C ( $\pm 5$ °C) |
| <b>Time within 5°C of actual peak Temperature (<math>t_p</math>)</b>   |                                    | 20 to 40 seconds     |
| <b>Ramp-down Rate</b>                                                  |                                    | 5°C/second max       |
| <b>Time 25°C to peak Temperature (<math>T_p</math>)</b>                |                                    | 8 minutes Max.       |
| <b>Do not exceed</b>                                                   |                                    | 280°C                |



### Physical Specifications

|                          |                                                                |
|--------------------------|----------------------------------------------------------------|
| <b>Terminal Finish</b>   | 100% Matte Tin-plated                                          |
| <b>Body Material</b>     | UL Recognized epoxy meeting flammability classification 94V-0. |
| <b>Terminal Material</b> | Copper Alloy                                                   |

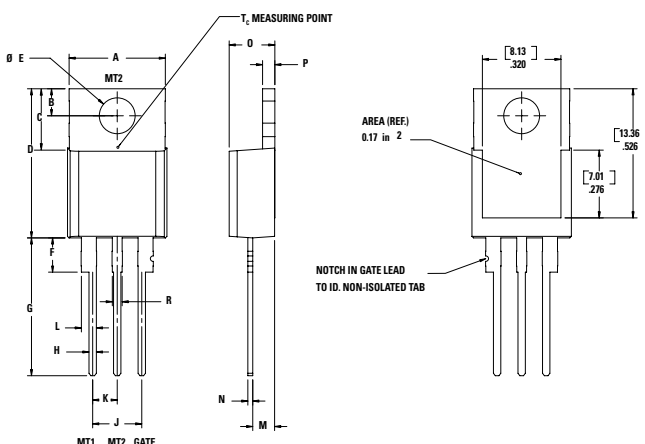
### Design Considerations

Careful selection of the correct component for the application's operating parameters and environment will go a long way toward extending the operating life of the Thyristor. Good design practice should limit the maximum continuous current through the main terminals to 75% of the component rating. Other ways to ensure long life for a power discrete semiconductor are proper heat sinking and selection of voltage ratings for worst case conditions. Overheating, overvoltage (including  $dv/dt$ ), and surge currents are the main killers of semiconductors. Correct mounting, soldering, and forming of the leads also help protect against component damage.

### Environmental Specifications

| Test                             | Specifications and Conditions                                              |
|----------------------------------|----------------------------------------------------------------------------|
| <b>AC Blocking</b>               | MIL-STD-750, M-1040, Cond A Applied Peak AC voltage @ 125°C for 1008 hours |
| <b>Temperature Cycling</b>       | MIL-STD-750, M-1051, 100 cycles; -40°C to +150°C, 15-min dwell-time        |
| <b>Temperature/Humidity</b>      | EIA/JEDEC, JESD22-A101 1008 hours; 320V - DC: 85°C; 85% rel humidity       |
| <b>High Temp Storage</b>         | MIL-STD-750, M-1031, 1008 hours; 150°C                                     |
| <b>Low-Temp Storage</b>          | 1008 hours; -40°C                                                          |
| <b>Resistance to Solder Heat</b> | MIL-STD-750 Method 2031                                                    |
| <b>Solderability</b>             | ANSI/J-STD-002, category 3 Test A                                          |
| <b>Lead Bend</b>                 | MIL-STD-750, M-2036 Cond E                                                 |

### Dimensions - TO-220AB (R-Package) - Non-Isolated Mounting Tab Common with Center Lead



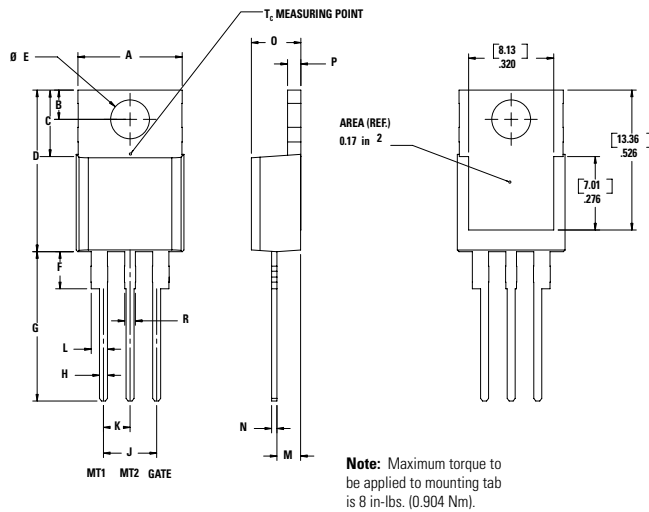
**Note:** Maximum torque to be applied to mounting tab is 8 in-lbs. (0.904 Nm).

| Dimension | Millimeters |       | Inches |       |
|-----------|-------------|-------|--------|-------|
|           | Min         | Max   | Min    | Max   |
| A         | 0.380       | 0.420 | 9.65   | 10.67 |
| B         | 0.105       | 0.115 | 2.67   | 2.92  |
| C         | 0.230       | 0.250 | 5.84   | 6.35  |
| D         | 0.590       | 0.620 | 14.99  | 15.75 |
| E         | 0.142       | 0.147 | 3.61   | 3.73  |
| F         | 0.110       | 0.130 | 2.79   | 3.30  |
| G         | 0.540       | 0.575 | 13.72  | 14.61 |
| H         | 0.025       | 0.035 | 0.64   | 0.89  |
| J         | 0.195       | 0.205 | 4.95   | 5.21  |
| K         | 0.095       | 0.105 | 2.41   | 2.67  |
| L         | 0.060       | 0.075 | 1.52   | 1.91  |
| M         | 0.085       | 0.095 | 2.16   | 2.41  |
| N         | 0.018       | 0.024 | 0.46   | 0.61  |
| O         | 0.178       | 0.188 | 4.52   | 4.78  |
| P         | 0.045       | 0.060 | 1.14   | 1.52  |
| R         | 0.038       | 0.048 | 0.97   | 1.22  |

# QJxx10xHx and QJxx10xx Series

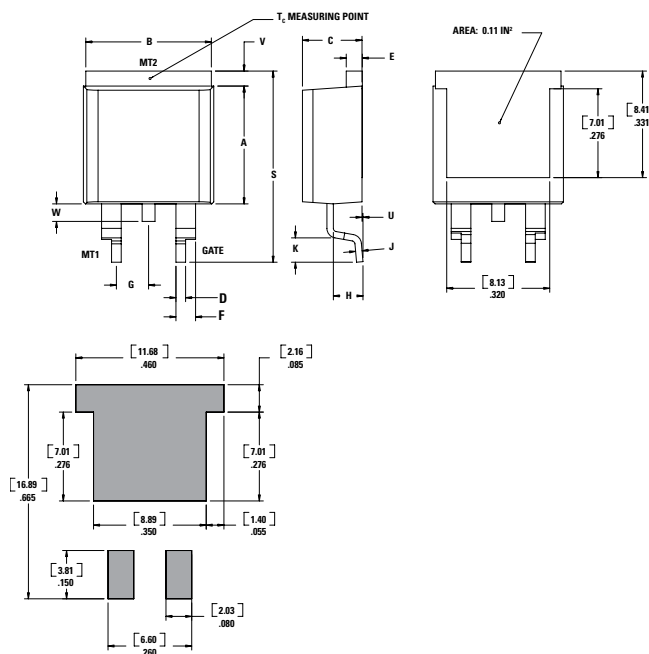
## 10 A High Temperature Alternistor and Standard (High Communication) TRIACs

### Dimensions - TO-220AB (L-Package) - Isolated Mounting Tab



| Dimension | Millimeters |       | Inches |       |
|-----------|-------------|-------|--------|-------|
|           | Min         | Max   | Min    | Max   |
| A         | 0.380       | 0.420 | 9.65   | 10.67 |
| B         | 0.105       | 0.115 | 2.67   | 2.92  |
| C         | 0.230       | 0.250 | 5.84   | 6.35  |
| D         | 0.590       | 0.620 | 14.99  | 15.75 |
| E         | 0.142       | 0.147 | 3.61   | 3.73  |
| F         | 0.110       | 0.130 | 2.79   | 3.30  |
| G         | 0.540       | 0.575 | 13.72  | 14.61 |
| H         | 0.025       | 0.035 | 0.64   | 0.89  |
| J         | 0.195       | 0.205 | 4.95   | 5.21  |
| K         | 0.095       | 0.105 | 2.41   | 2.67  |
| L         | 0.060       | 0.075 | 1.52   | 1.91  |
| M         | 0.085       | 0.095 | 2.16   | 2.41  |
| N         | 0.018       | 0.024 | 0.46   | 0.61  |
| O         | 0.178       | 0.188 | 4.52   | 4.78  |
| P         | 0.045       | 0.060 | 1.14   | 1.52  |
| R         | 0.038       | 0.048 | 0.97   | 1.22  |

### Dimensions - TO-263AB (N-Package) - D2-PAK Surface Mount

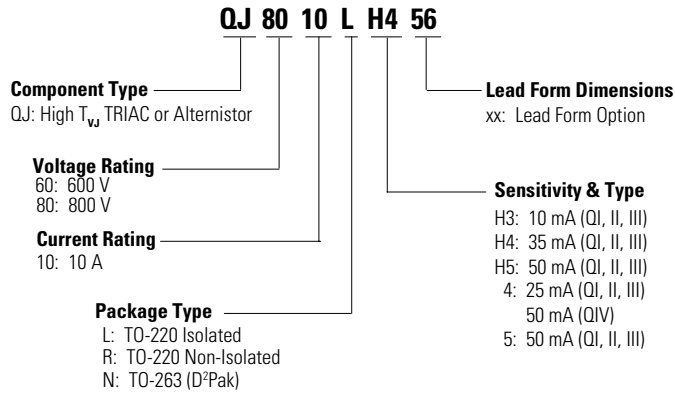


| Dimension | Inches |       | Millimeters |       |
|-----------|--------|-------|-------------|-------|
|           | Min    | Max   | Min         | Max   |
| A         | 0.360  | 0.370 | 9.14        | 9.40  |
| B         | 0.380  | 0.420 | 9.65        | 10.67 |
| C         | 0.178  | 0.188 | 4.52        | 4.78  |
| D         | 0.025  | 0.035 | 0.64        | 0.89  |
| E         | 0.045  | 0.060 | 1.14        | 1.52  |
| F         | 0.060  | 0.075 | 1.52        | 1.91  |
| G         | 0.095  | 0.105 | 2.41        | 2.67  |
| H         | 0.092  | 0.102 | 2.34        | 2.59  |
| J         | 0.018  | 0.024 | 0.46        | 0.61  |
| K         | 0.090  | 0.110 | 2.29        | 2.79  |
| S         | 0.590  | 0.625 | 14.99       | 15.88 |
| V         | 0.035  | 0.045 | 0.89        | 1.14  |
| U         | 0.002  | 0.010 | 0.05        | 0.25  |
| W         | 0.040  | 0.070 | 1.02        | 1.78  |

# QJxx10xHx and QJxx10xx Series

## 10 A High Temperature Alternistor and Standard (High Communication) TRIACs

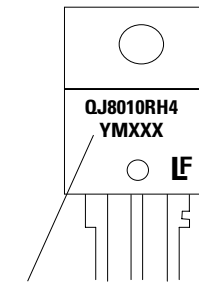
### Part Numbering System



### Part Marking System

TO-220 AB - (L and R Package)

TO-263 AB - (N Package)



#### Date Code Marking

**Y:** Year Code

**M:** Month Code

**XXX:** Lot Trace Code

### Product Selector

| Part Number | Voltage |       | Gate Sensitivity Quadrants |           | Type              | Package                   |
|-------------|---------|-------|----------------------------|-----------|-------------------|---------------------------|
|             | 600 V   | 800 V | I – II – III               | IV        |                   |                           |
| QJxx10LH3   | x       | x     | 10 mA                      | -         | Alternistor TRIAC | TO-220L                   |
| QJxx10RH3   | x       | x     | 10 mA                      | -         | Alternistor TRIAC | TO-220R                   |
| QJxx10NH3   | x       | x     | 10 mA                      | -         | Alternistor TRIAC | TO-263 D <sup>2</sup> PAK |
| QJxx10LH4   | x       | x     | 35 mA                      | -         | Alternistor TRIAC | TO-220L                   |
| QJxx10RH4   | x       | x     | 35 mA                      | -         | Alternistor TRIAC | TO-220R                   |
| QJxx10NH4   | x       | x     | 35 mA                      | -         | Alternistor TRIAC | TO-263 D <sup>2</sup> PAK |
| QJxx10LH5   | x       | x     | 50 mA                      | -         | Alternistor TRIAC | TO-220L                   |
| QJxx10RH5   | x       | x     | 50 mA                      | -         | Alternistor TRIAC | TO-220R                   |
| QJxx10NH5   | x       | x     | 50 mA                      | -         | Alternistor TRIAC | TO-263 D <sup>2</sup> PAK |
| QJxx10L4    | x       | x     | 25 mA                      | 50 mA     | Standard TRIAC    | TO-220L                   |
| QJxx10R4    | x       | x     | 25 mA                      | 50 mA     | Standard TRIAC    | TO-220R                   |
| QJxx10N4    | x       | x     | 25 mA                      | 50 mA     | Standard TRIAC    | TO-263 D <sup>2</sup> PAK |
| QJxx10L5    | x       | x     | 50 mA                      | TYP 75 mA | Standard TRIAC    | TO-220L                   |
| QJxx10R5    | x       | x     | 50 mA                      | TYP 75 mA | Standard TRIAC    | TO-220R                   |
| QJxx10N5    | x       | x     | 50 mA                      | TYP 75 mA | Standard TRIAC    | TO-263 D <sup>2</sup> PAK |

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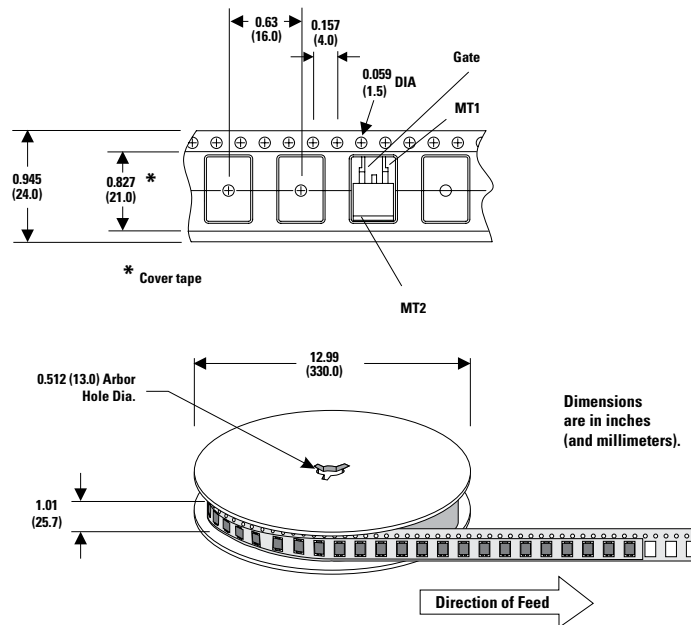
## 10 A High Temperature Alternistor and Standard (High Communication) TRIACs

### Packing Options

| Part Number  | Marking    | Weight | Packing Mode     | M.O.Q              |
|--------------|------------|--------|------------------|--------------------|
| QJxx10RHyTP  | QJxx10RHy  | 2.2 g  | Tube Pack        | 1000 (50 per tube) |
| QJxx10LHyTP  | QJxx10LHy  | 2.2 g  | Tube Pack        | 1000 (50 per tube) |
| QJxx10NHypTP | QJxx10NHyp | 1.6 g  | Tube Pack        | 1000 (50 per tube) |
| QJxx10NHypRP | QJxx10NHyp | 1.6 g  | Embossed Carrier | 500                |
| QJxx10LyTP   | QJxx10Ly   | 2.2 g  | Tube Pack        | 1000 (50 per tube) |
| QJxx10RyTP   | QJxx10Ry   | 2.2 g  | Tube Pack        | 1000 (50 per tube) |
| QJxx10NyTP   | QJxx10Ny   | 1.6 g  | Tube Pack        | 1000 (50 per tube) |
| QJxx10NypRP  | QJxx10Nyp  | 1.6 g  | Embossed Carrier | 500                |

### TO-263 Embossed Carrier Reel Pack (RP) Specifications

Meets all EIA-481-2 Standards



#### Disclaimer Notice

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