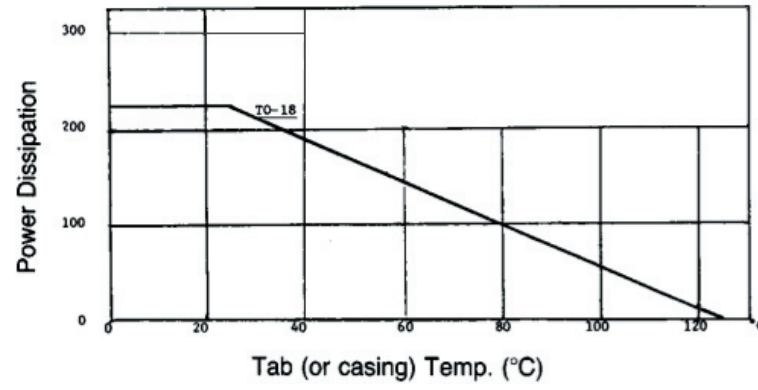
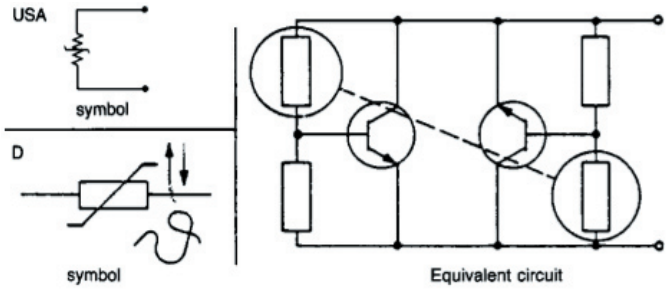
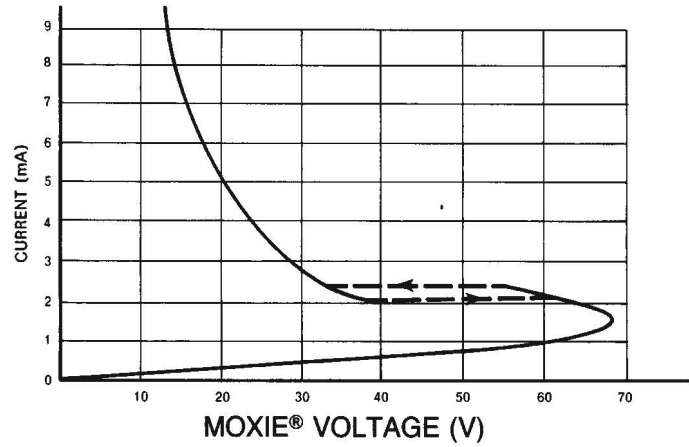


Equivalent Circuit

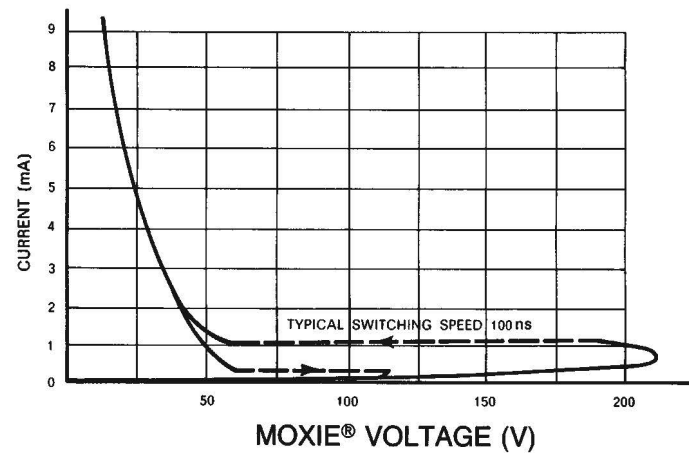
Power Derating Curves in Free Air



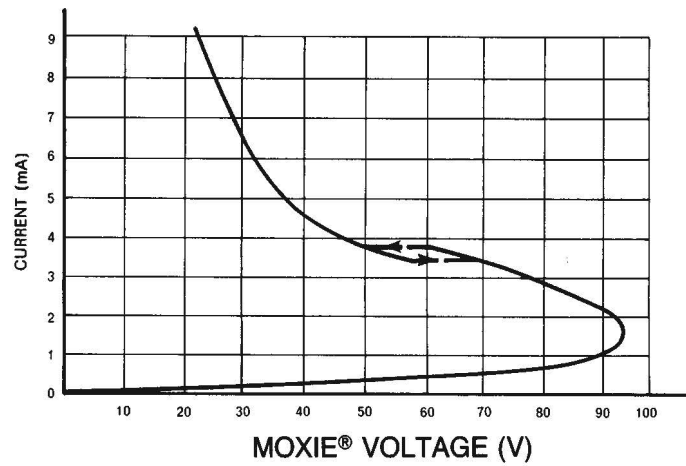
TS3-57



TS3-65



TS3-85



TS3



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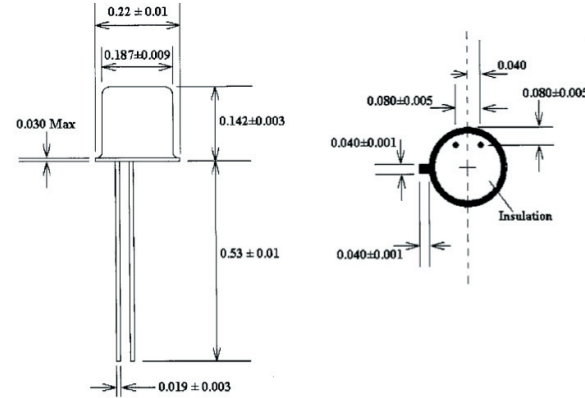
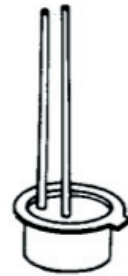
Thermal Sensors MOXIE (NTC) are a family of variable resistance thermal sensors having a highly specific 'transition region.' Within this transition region the devices typically exhibit a negative temperature coefficient ranging from 40% per °C to 200% per °C. Below the transition region they exhibit a linear "thermistor" characteristic of -2 to -4%/°C.

Applications: Sensors for temperature protection, control and limiting. Voltage, current and frequency limiters in electronics.

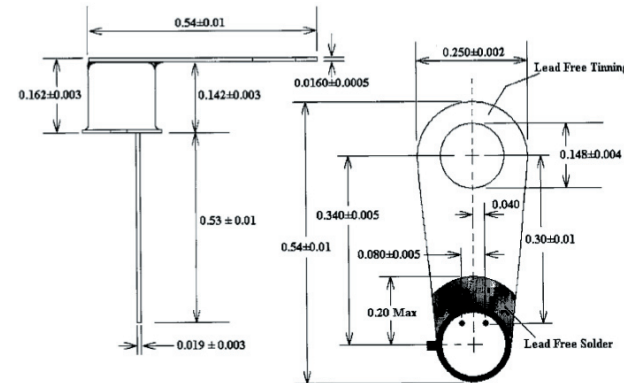
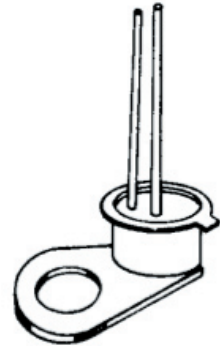
Examples: Overtemperature protector for power semi-conductors, such as transistors, power output stages, amplifiers.



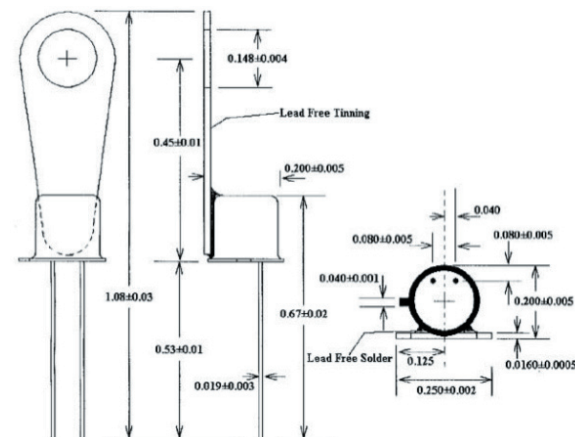
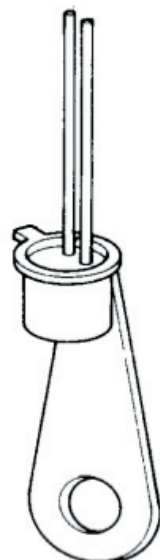
Dimensions (mm)



TS3



TS3 B3



TS3 C3

Specifications

| Type | Parameter | Temp, (°C) | Condition | Min. | Typ. | Max. | Units |
|--------|-------------------------------|------------|------------|------|------|------|--------|
| TS3-57 | Resistance | 35 | Heating | 35 | 85 | 230 | kΩ |
| | Resistance | 57 | Heating | | 1.0 | | kΩ |
| | Resistance | 75 | Heating | 15 | 45 | 100 | Ω |
| | Sensitivity ¹ | 57 | Heating | 40 | 100 | | % / °C |
| | Latching Current ² | - | D.C. Volts | 0.6 | 1.8 | 3.2 | mA |

| | | | | | | | |
|--------|-------------------------------|----|------------|------|------|------|--------|
| TS3-65 | Resistance | 40 | Heating | 120 | 620 | 1700 | kΩ |
| | Resistance | 65 | Heating | | 5.0 | | kΩ |
| | Resistance | 80 | Heating | 10 | 50 | 100 | Ω |
| | Sensitivity ¹ | 65 | Heating | 80 | 200 | | % / °C |
| | Latching Current ² | - | D.C. Volts | 0.14 | 0.33 | 0.52 | mA |

| | | | | | | | |
|--------|-------------------------------|-----|------------|-----|-----|-----|--------|
| TS3-85 | Resistance | 65 | Heating | 25 | 45 | 180 | kΩ |
| | Resistance | 85 | Heating | | 1.5 | | kΩ |
| | Resistance | 100 | Heating | 75 | 150 | 330 | Ω |
| | Sensitivity ¹ | 85 | Heating | 30 | 40 | | % / °C |
| | Latching Current ² | - | D.C. Volts | 1.4 | 2.0 | 2.6 | mA |

¹ Sensitivity is defined as the percentage of resistance change per variation of 1°C in temperature.

² Latching current is the smallest current that will cause the device to make changes in resistance while it's cooling to a lower temp.

| Typical Characteristics | TS3-XX | TS3-XXB3 |
|--------------------------------|--------|----------|
| Thermal Resistance(°C/W) | | |
| - Die to tab (or casing) | 250 | 300 |
| - Tab (or case) to air | 200 | 200 |
| Time Constant (sec) | | |
| - Air to tab (or casing) | 60 | 60 |
| - Tab (or case) to die | 2.0 | 2.5 |
| Shunt Capacitance (pF) | | |
| - Lead to lead | 0.5 | 0.5 |
| - Lead to tab (or casing) | 0.2 | 0.2 |
| Dielectric Withstanding (V dc) | | |
| - Lead to tab (or casing) | 600 | 600 |
| Storage Temp. (°C) | 120 | 120 |
| Solder Temp. | | |
| (1/16" from case, 10 sec) | 260 | 260 |

| Typical Response Characteristics | TS3-57 | TS3-65 | TS3-85 |
|----------------------------------|--------|--------|--------|
| Temp.Coef. (%/°C) | | | |
| Pre-Transition | -2.0 | -4.0 | -3.0 |
| Transition | -100 | -200 | -40 |
| Post-Transition | -0.25 | -0.5 | -1.5 |

Ordering

TS3 XX Mounting Tab

