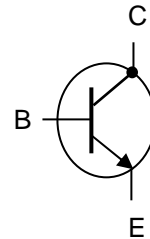


NPN BSX62-BSX63

SWITCHING TRANSISTORS

The BSX62 and BSX63 are NPN switching transistors mounted in TO-39 metal package. They are intended for use in medium power switching. High current and low voltage. Compliance to RoHS.



ABSOLUTE MAXIMUM RATINGS

| Symbol | Ratings | Value | | Unit |
|-----------|--|-------------|-------|------|
| | | BSX62 | BSX63 | |
| V_{CEO} | Collector-Emitter Voltage $I_B = 0$ | 40 | 60 | V |
| V_{CBO} | Collector-Base Voltage $I_E = 0$ | 60 | 80 | V |
| V_{EBO} | Emitter-Base Voltage $I_C = 0$ | 5 | | V |
| I_C | Collector Current | 3 | | A |
| I_{CM} | Collector Peak Current | 3 | | A |
| I_{BM} | Base Peak Current | 500 | | mA |
| P_D | Total Power Dissipation $T_{amb} = 25^\circ$ | 5 | | W |
| T_J | Junction Temperature | 200 | | °C |
| T_{amb} | Operating ambient temperature | -65 to +150 | | |
| T_{Stg} | Storage Temperature range | -65 to +150 | | |

THERMAL CHARACTERISTICS

| Symbol | Ratings | Value | Unit |
|-------------|---|-------|------|
| R_{thJ-a} | Thermal Resistance, Junction to ambient | 200 | °C/W |
| R_{thJ-c} | Thermal Resistance, Junction to case | 28 | °C/W |

SWITCHING TIMES

| Symbol | Ratings | Value | Unit |
|-----------|---|-------|------|
| t_{on} | Turn-on time $I_{Con} = 1\text{ A}; I_{Bon} = 50\text{ mA}$ | 300 | ns |
| t_{off} | Turn-off time $I_{Boff} = -50\text{ mA}$ | 1.5 | µs |

NPN BSX62-BSX63

ELECTRICAL CHARACTERISTICS

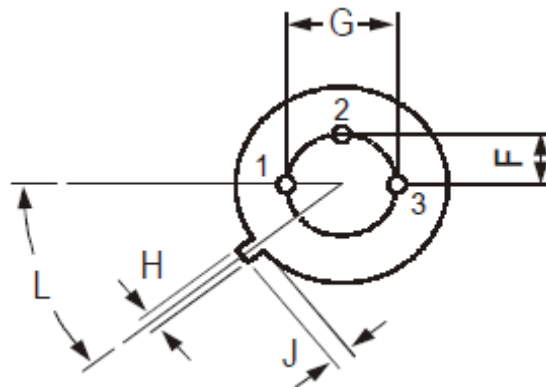
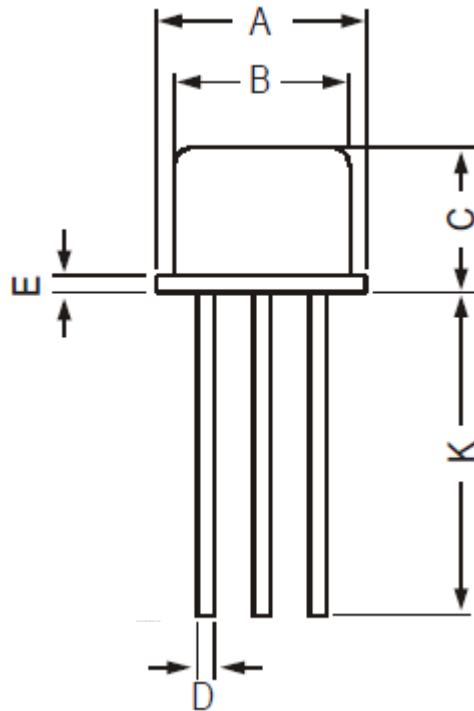
T_j=25°C unless otherwise specified

| Symbol | Ratings | Test Condition(s) | Min | Typ | Max | Unit |
|--|--------------------------------------|---|----------|-----|-----|------|
| I_{CBO} | Collector Cutoff Current | V _{CB} = 40 V, I _E = 0 | - | - | 100 | nA |
| | | BSX62 | | | | |
| | | V _{CB} = 60 V, I _E = 0 | BSX63 | | | |
| | | V _{CB} = 40 V, I _E = 0 T _j = 150°C | BSX62 | - | - | 100 |
| V _{CB} = 60 V, I _E = 0 T _j = 150°C | BSX63 | | | | | |
| I_{EBO} | Emitter Cutoff Current | V _{BE} = 5.0 V, I _C = 0 | - | - | 100 | nA |
| V_{CE(SAT)} | Collector-Emitter saturation Voltage | I _C = 1 A, I _B = 100 mA | - | - | 0.7 | V |
| | | I _C = 2 A, I _B = 200 mA | - | - | 0.8 | |
| V_{BE(SAT)} | Base-Emitter saturation Voltage | I _C = 1 A, I _B = 100 mA | - | - | 1.2 | V |
| | | I _C = 2 A, I _B = 200 mA | - | - | 1.3 | |
| V_{BE} | Base-Emitter Voltage | I _C = 100 mA, V _{CE} = 1 V | - | - | 1 | V |
| | | I _C = 1 A, V _{CE} = 1 V | 1 | - | 1.2 | |
| | | I _C = 2 A, V _{CE} = 5 V | - | - | 1.3 | |
| h_{FE} | DC Current Gain | I _C = 100 m V _{CE} = 1 V | BSX62/10 | - | 110 | - |
| | | | BSX63/10 | | | |
| | | | BSX62/16 | | | |
| | | | BSX63/16 | | | |
| | | I _C = 1 A V _{CE} = 1 V | BSX62/10 | 63 | 100 | 160 |
| | | | BSX63/10 | | | |
| | | | BSX62/16 | | | |
| | | | BSX63/16 | | | |
| | | I _C = 2 A V _{CE} = 1 V | BSX62/10 | - | 70 | - |
| | | | BSX63/10 | | | |
| | | | BSX62/16 | | | |
| | | | BSX63/16 | | | |
| f_T | Transition frequency | I _C = 200 mA, V _{CE} = 10 V f = 100MHz | 30 | 70 | - | MHz |
| C_C | Collector capacitance | I _E = i _e = 0, V _{CB} = 10 V f = 1MHz | - | - | 70 | pF |

NPN BSX62-BSX63

MECHANICAL DATA CASE TO-39

| DIMENSIONS (mm) | | |
|-----------------|-------|------|
| | min | max |
| A | 8.50 | 9.39 |
| B | 7.74 | 8.50 |
| C | 6.09 | 6.60 |
| D | 0.40 | 0.53 |
| E | - | 0.88 |
| F | 2.41 | 2.66 |
| G | 4.82 | 5.33 |
| H | 0.71 | 0.86 |
| J | 0.73 | 1.02 |
| K | 12.70 | - |
| L | 42° | 48° |



| | |
|---------|-----------|
| Pin 1 : | Emitter |
| Pin 2 : | Base |
| Pin 3 : | Collector |
| Case : | Collector |

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