

T-27-09

MAXIMUM RATINGS

| Rating | Symbol | Value | | Unit |
|--------------------------------|------------------|------------------|------------------|------|
| | | BCX17L BCX19L | BCX18L BCX20L | |
| Collector-Emitter Voltage | V _{CEO} | 45 | 25 | Vdc |
| Collector-Base Voltage | V _{CBO} | 50 | 30 | Vdc |
| Emitter-Base Voltage | V _{EBO} | 5.0 | | Vdc |
| Collector Current — Continuous | I _C | 500 | | mAdc |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|---|-----------------------------------|-------------|------|
| Total Device Dissipation FR-5 Board,* T _A = 25°C Derate above 25°C | P _D | 225 | mW |
| Thermal Resistance Junction to Ambient | R _{θJA} | 556 | °C/W |
| Total Device Dissipation Alumina Substrate,** T _A = 25°C Derate above 25°C | P _D | 300 | mW |
| Thermal Resistance Junction to Ambient | R _{θJA} | 417 | °C/W |
| Junction and Storage Temperature | T _J , T _{stg} | -55 to +150 | °C |

*FR-5 = 1.0 x 0.75 x 0.062 in.

**Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

DEVICE MARKING

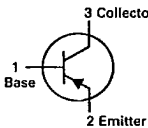
BCX17L = T1; BCX18L = T2; BCX19L = U1; BCX20L = U2

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|----------------------|----------|-----|------|------|
| OFF CHARACTERISTICS | | | | | |
| Collector-Emitter Breakdown Voltage (I _C = 10 mAdc, I _B = 0) | V _{(BR)CEO} | 45 25 | — | — | Vdc |
| Collector-Emitter Breakdown Voltage (I _C = 10 μAdc, I _C = 0) | V _{(BR)CES} | 50 30 | — | — | Vdc |
| Collector Cutoff Current (V _{CB} = 20 Vdc, I _E = 0) | I _{CBO} | — | — | 100 | nAdc |
| (V _{CB} = 20 Vdc, I _E = 0, T _A = 150°C) | | — | — | 5.0 | μAdc |
| Emitter Cutoff Current (V _{BE} = 5.0 Vdc, I _C = 0) | I _{EBO} | — | — | 10 | μAdc |
| ON CHARACTERISTICS | | | | | |
| DC Current Gain (I _C = 100 mAdc, V _{CE} = 1.0 Vdc) | h _{FE} | 100 | — | 600 | — |
| (I _C = 300 mAdc, V _{CE} = 1.0 Vdc) | | 70 | — | — | — |
| (I _C = 500 mAdc, V _{CE} = 1.0 Vdc) | | 40 | — | — | — |
| Collector-Emitter Saturation Voltage (I _C = 500 mAdc, I _B = 50 mAdc) | V _{CE(sat)} | — | — | 0.62 | Vdc |
| Base-Emitter On Voltage (I _C = 500 mAdc, V _{CE} = 1.0 Vdc) | V _{BE(on)} | — | — | 1.2 | Vdc |

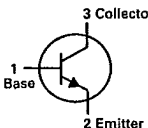
PNP

BCX17L
BCX18L




NPN

BCX19L
BCX20L



CASE 318-03, STYLE 6
SOT-23 (TO-236AB)



GENERAL PURPOSE
TRANSISTORS