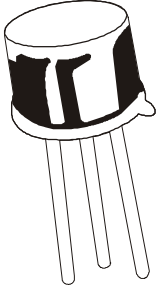


NPN/PNP SILICON PLANAR TRANSISTORS

**CL100S NPN
CK100S PNP
TO-39**



ABSOLUTE MAXIMUM RATINGS

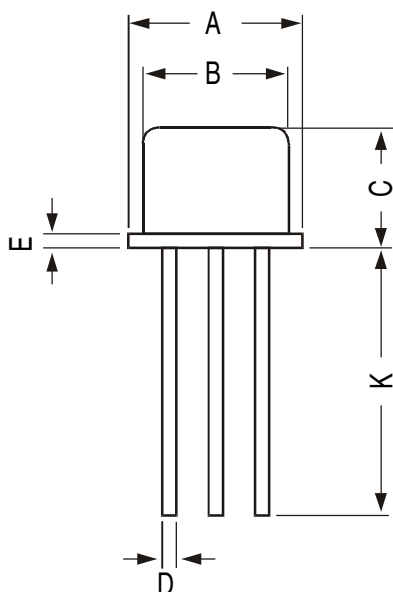
| DESCRIPTION | SYMBOL | VALUE | UNIT |
|--|----------|-------------|----------|
| Collector -Emitter Voltage | VCEO | 50 | V |
| Collector -Base Voltage | VCBO | 60 | V |
| Emitter Base Voltage | VEBO | 5.0 | V |
| Collector Current | ICM | 1.0 | A |
| Power Dissipation @ Ta=25 deg C | PD | 800 | mW |
| Derate Above 25 deg C | | 5.33 | mW/deg C |
| Power Dissipation @ Tc=25 deg C | PD | 3.0 | W |
| Derate Above 25 deg C | | 20 | mW/deg C |
| Operating & Storage Junction Temperature Range | Tj, Tstg | -55 to +175 | deg C |

ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

| DESCRIPTION | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|----------------------------------|-----------|-------------------|-----|-----|------|------|
| Collector -Emitter Voltage | VCEO | IC=1mA, IB=0 | 50 | - | - | V |
| Collector -Base Voltage | VCBO | IC=100uA, IE=0 | 60 | - | - | V |
| Emitter Base Voltage | VEBO | IE=100uA, IC=0 | 5.0 | - | - | V |
| Collector Cut off Current | ICBO | VCB=40V, IE=0 | - | - | 1.0 | uA |
| Emitter Cut off Current | IEBO | VEB=5V, IC=0 | - | - | 1.0 | uA |
| DC Current Gain | hFE* | 2mA, VCE=5V | 20 | - | - | |
| Collector -Emitter (sat) Voltage | VCE(sat)* | IC=150mA, IB=15mA | - | - | 0.60 | V |

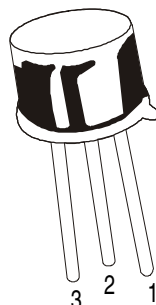
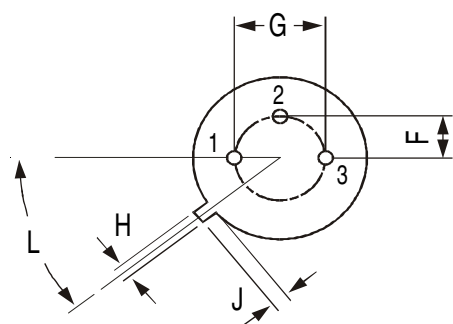
*Pulse Condition : Pulse Width =300us, Duty Cycle=2%

TO-39 Metal Can Package



All dimensions are in mm

| DIM | 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 DEG | 48 DEG |



PIN CONFIGURATION

1. EMITTER
2. BASE
3. COLLECTOR

Packing Detail

| PACKAGE | STANDARD PACK | | INNER CARTON BOX | | OUTER CARTON BOX | | |
|---------|-----------------|----------------|------------------|-------|-------------------|-------|--------|
| | Details | Net Weight/Qty | Size | Qty | Size | Qty | Gr Wt |
| TO-39 | 500 pcs/polybag | 540 gm/500 pcs | 3" x 7.5" x 7.5" | 20.0K | 17" x 15" x 13.5" | 32.0K | 40 kgs |

Disclaimer

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