

DESCRIPTION

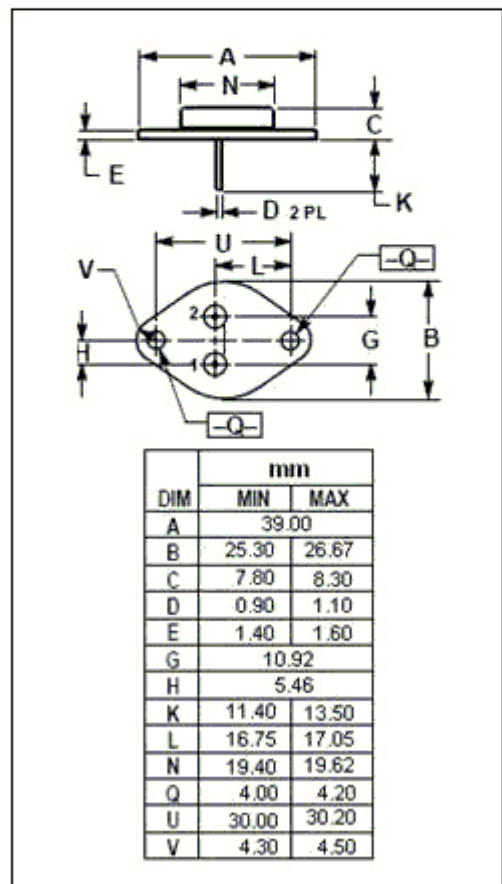
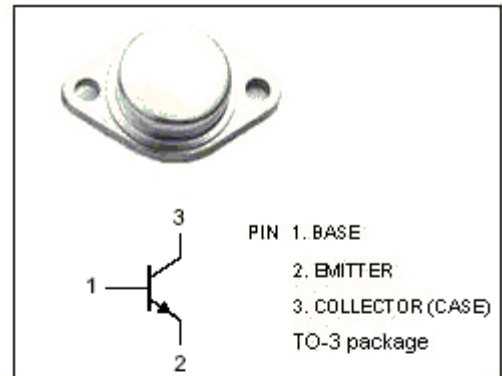
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 800V$ (Min)
- High Switching Speed
- Wide Area of Safe Operation

APPLICATIONS

- Designed for high speed switching and horizontal deflection output applications.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ C$)

| SYMBOL | PARAMETER | MAX | UNIT |
|-----------|---|---------|------------|
| V_{CBO} | Collector-Base Voltage | 1200 | V |
| V_{CEO} | Collector-Emitter Voltage | 800 | V |
| V_{EBO} | Emitter-Base Voltage | 7 | V |
| I_C | Collector Current-Continuous | 10 | A |
| I_{CM} | Collector Current-Peak | 15 | A |
| I_B | Base Current-Continuous | 5 | A |
| P_C | Collector Power Dissipation @ $T_C=25^\circ C$ | 200 | W |
| T_j | Junction Temperature | 175 | $^\circ C$ |
| T_{stg} | Storage Temperature Range | -65~175 | $^\circ C$ |



Product Specification

Silicon NPN Power Transistor

2SC3720

ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|-------------------------------------|-----|------|-----|------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C= 10\text{mA}; I_B= 0$ | 800 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C= 4\text{A}; I_B= 0.8\text{A}$ | | | 1.5 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C= 4\text{A}; I_B= 0.8\text{A}$ | | | 2.0 | V |
| h_{FE} | DC Current Gain | $I_C= 4\text{A}; V_{CE}= 5\text{V}$ | 6 | | 20 | |
| I_{CBO} | Collector Cutoff Current | $V_{CB}= 1000\text{V}; I_E= 0$ | | | 0.1 | mA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}= 6\text{V}; I_C= 0$ | | | 0.1 | mA |

Switching Times

| | | | | | | |
|-----------|--------------|--|--|--|-----|---------------|
| t_{on} | Turn-On Time | $I_C= 4\text{A}; I_{B1}= 0.8\text{A}; I_{B2}= -1.6\text{A}; V_{CC}= 250\text{V}$ | | | 1.0 | μs |
| t_{stg} | Storage Time | | | | 3.5 | μs |
| t_f | Fall Time | | | | 0.3 | μs |