

SPTECH Silicon NPN Power Transistor

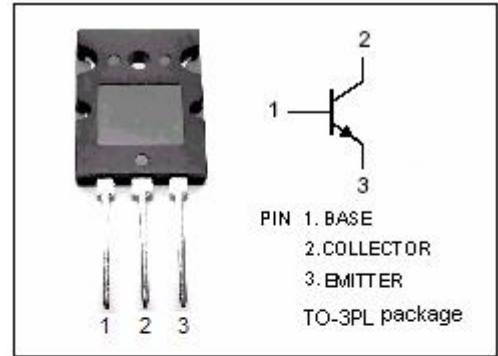
2SC3998 72L

DESCRIPTION

- High Switching Speed
- High Breakdown Voltage-
: $V_{(BR)CBO} = 1100V(\text{Min})$

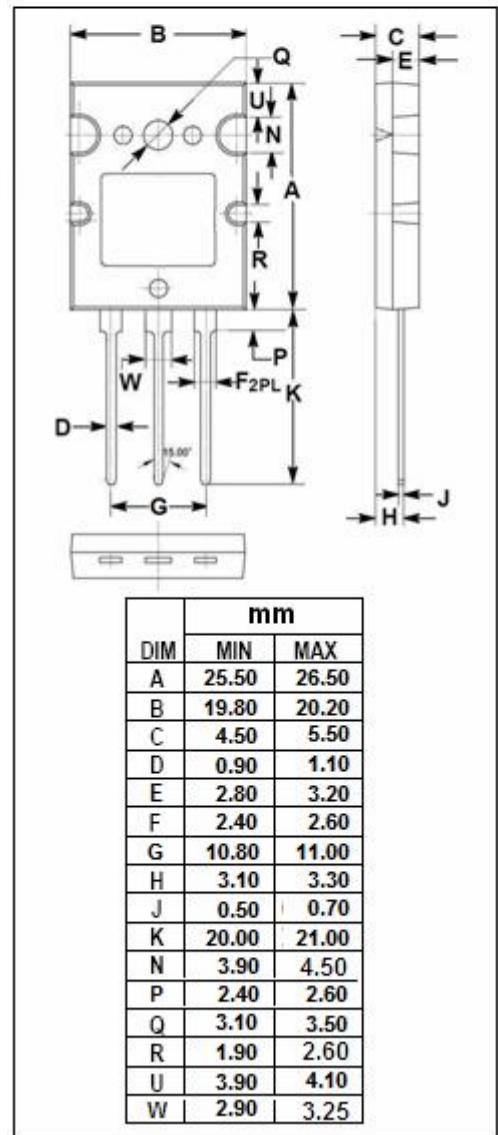
APPLICATIONS

- Designed for horizontal deflection output applications.



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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 1100 | V |
| V_{CEO} | Collector-Emitter Voltage | 600 | V |
| V_{EBO} | Emitter-Base Voltage | 6 | V |
| I_C | Collector Current-Continuous | 30 | A |
| I_{CM} | Collector Current-Pulse | 60 | A |
| P_C | Collector Power Dissipation @ $T_C=25^\circ\text{C}$ | 250 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |



ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|---|-----|------|-----|---------------|
| $V_{CE(SUS)}$ | Collector-Emitter Sustaining Voltage | $I_C=10\text{mA}; I_B=0$ | 600 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=20\text{A}; I_B=5\text{A}$ | | | 5.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C=20\text{A}; I_B=5\text{A}$ | | | 1.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB}=600\text{V}; I_E=0$ | | | 10 | μA |
| I_{CES} | Collector Cutoff Current | $V_{CE}=1100\text{V}; R_{BE}=0$ | | | 1.0 | mA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}=4\text{V}; I_C=0$ | | | 1.0 | mA |
| h_{FE-1} | DC Current Gain | $I_C=1\text{A}; V_{CE}=5\text{V}$ | 18 | 24 | 30 | |
| h_{FE-2} | DC Current Gain | $I_C=20\text{A}; V_{CE}=5\text{V}$ | 4 | | 8 | |
| t_{stg} | Storage Time | $I_C=12\text{A}, I_{B1}=2.4\text{A}; I_{B2}=-4.8\text{A}$ | | 2.7 | 3.0 | μs |
| t_f | Fall Time | | | | 0.2 | μs |