

isc Silicon NPN Power Transistor

2SC5803

DESCRIPTION

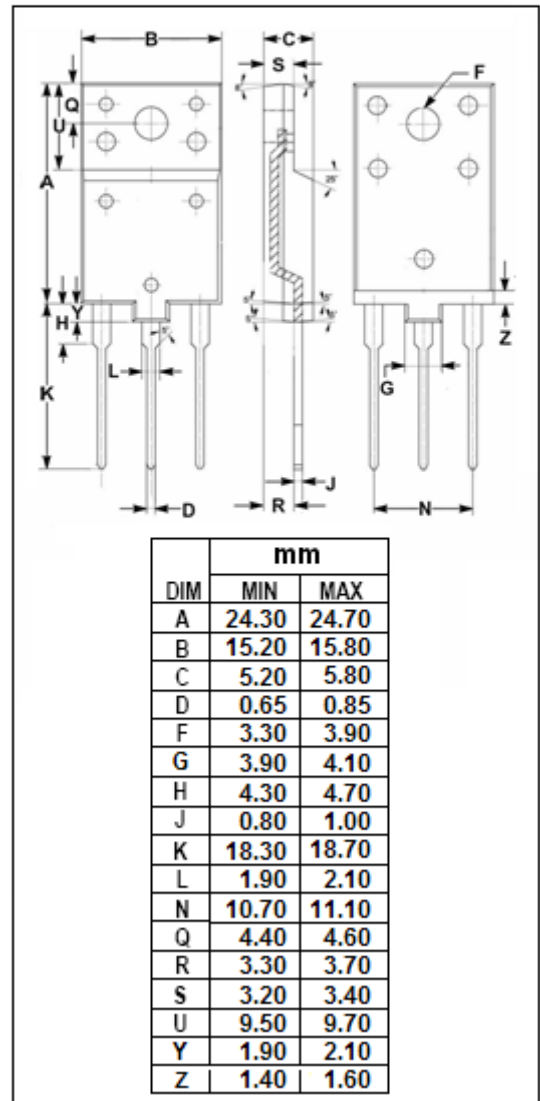
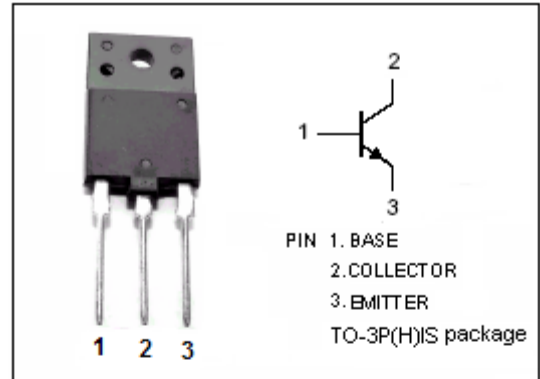
- High Breakdown Voltage-
: $V_{CBO}=1500V$ (Min)
- High Switching Speed
- Wide Area of Safe Operation

APPLICATIONS

- Designed for high voltage color display horizontal deflection output applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|-------------|
| V_{CBO} | Collector-Base Voltage | 1500 | V |
| V_{CEO} | Collector-Emitter Voltage | 800 | V |
| V_{EBO} | Emitter-Base Voltage | 6 | V |
| I_C | Collector Current- Continuous | 12 | A |
| I_{CM} | Collector Current- Peak | 24 | A |
| P_C | Collector Power Dissipation @ $T_C=25^{\circ}C$ | 70 | W |
| T_J | Junction Temperature | 150 | $^{\circ}C$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^{\circ}C$ |



isc Silicon NPN Power Transistor**2SC5803****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|----------------------------|-----|------|-----|---------|
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C= 8A; I_B= 2A$ | | | 3.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C= 8A; I_B= 2A$ | | | 1.5 | V |
| I_{CES} | Collector Cutoff Current | $V_{CE}= 1400V; V_{BE}= 0$ | | | 1.0 | mA |
| I_{CBO} | Collector Cutoff Current | $V_{CB}= 800V; I_E= 0$ | | | 10 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}= 4V; I_C= 0$ | | | 1.0 | mA |
| h_{FE-1} | DC Current Gain | $I_C= 1A; V_{CE}= 5V$ | 15 | | 40 | |
| h_{FE-2} | DC Current Gain | $I_C= 8A; V_{CE}= 5V$ | 5.5 | | 8.5 | |

Switching Times

| | | | | | | |
|-----------|--------------|---|--|--|-----|---------|
| t_{stg} | Storage Time | $I_C= 7A, I_{B1}= 1.4A; I_{B2}= -2.8A;$ $V_{CC}= 200V; R_L= 28.6 \Omega$ | | | 4.0 | μs |
| t_f | Fall Time | | | | 0.3 | μs |