

isc Silicon NPN Power Transistor

2SC5803

DESCRIPTION

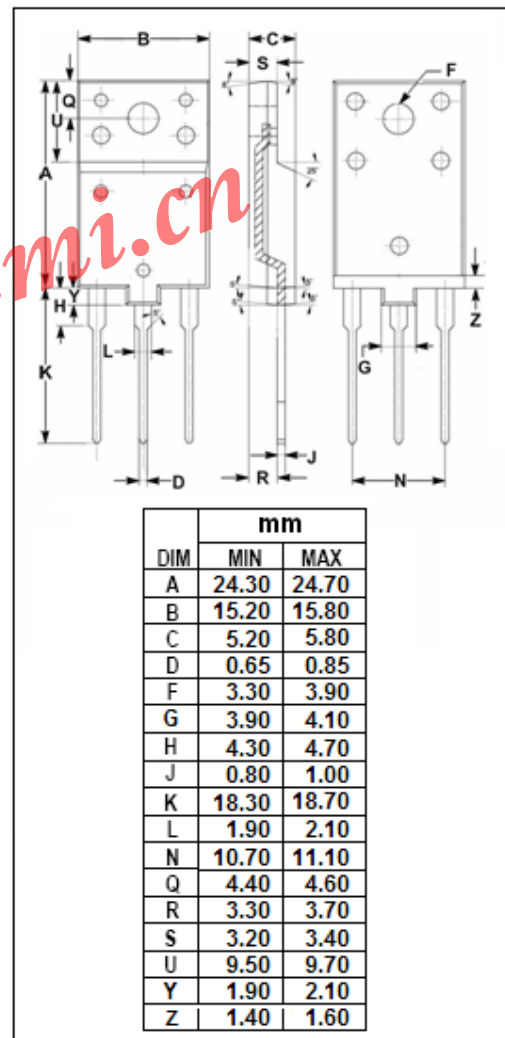
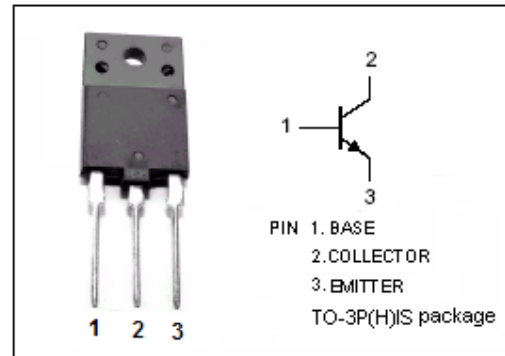
- High Breakdown Voltage-
: $V_{CBO} = 1500V$ (Min)
- High Switching Speed
- Wide Area of Safe Operation

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

Switching Times

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