

isc Silicon NPN Power Transistor

2SD5070

DESCRIPTION

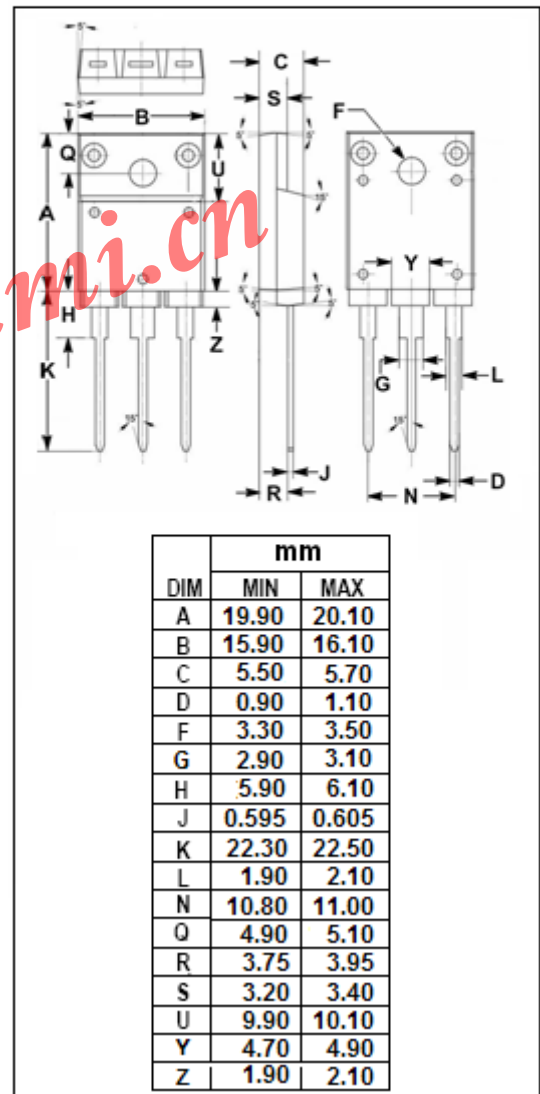
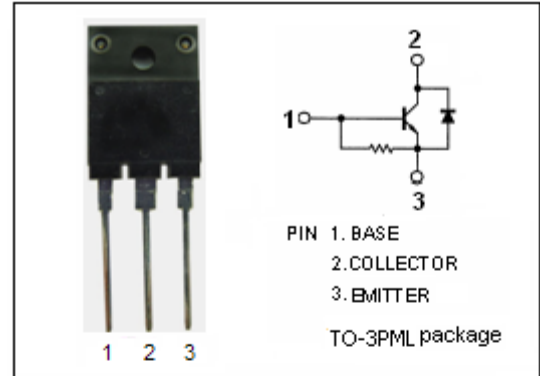
- High Breakdown Voltage-
: $V_{CBO}= 1500V$ (Min)
- High Switching Speed
- High Reliability
- Built-in Damper Diode

APPLICATIONS

- Designed for color TV horizontal 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 | 2.5 | A |
| I_{CM} | Collector Current-Peak | 10 | A |
| P_C | Collector Power Dissipation @ $T_C=25^{\circ}C$ | 50 | W |
| T_J | Junction Temperature | 150 | $^{\circ}C$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^{\circ}C$ |



isc Silicon NPN Power Transistor

2SD5070

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 | $I_C=2\text{A}; I_B=0.6\text{A}$ | | | 8.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C=2\text{A}; I_B=0.6\text{A}$ | | | 1.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB}=800\text{V}; I_E=0$ | | | 10 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}=4\text{V}; I_C=0$ | 40 | | 200 | mA |
| h_{FE} | DC Current Gain | $I_C=0.5\text{A}; V_{CE}=5\text{V}$ | 8 | | | |
| V_{ECF} | C-E Diode Forward Voltage | $I_F=2.5\text{A}$ | | | 2.0 | V |
| f_T | Current-Gain—Bandwidth Product | $I_C=0.5\text{A}; V_{CE}=10\text{V}$ | | 3 | | MHz |
| t_f | Fall Time | $I_C=2\text{A}, I_{B1}=0.6\text{A}; I_{B2}=-1.2\text{A}$ $R_L=100\Omega; V_{CC}=200\text{V}$ | | | 0.4 | μs |