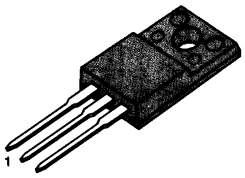
# KSC5337F NPN SILICON TRANSISTOR

## HIGH VOLTAGE AND HIGH RELIABILITY

- HIGH SPEED SWITCHING
- WIDE SOA

TO-220F



1. Base 2. Collector 3. Emitter

## ABSOLUTE MAXIMUM RATINGS

| Characteristic | Symbol | Rating | Unit |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 700 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | 400 | V |
| Emitter-Base Voltage | $V_{EBO}$ | 9 | V |
| Collector Current (DC) | $I_C$ | 8 | A |
| Collector Current (Pulse) | $I_C$ | 15 | A |
| Base Current | $I_B$ | 4 | A |
| Collector Dissipation ($T_C$=25°C) | $P_C$ | 40 | W |
| Junction Temperature | $T_J$ | 150 | °C |
| Storage Temperature | $T_{STG}$ | -65 ~ 150 | °C |

## ELECTRICAL CHARACTERISTICS ($T_C$=25°C)

| Characteristic | Symbol | Test Condition | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| *Collector Base Breakdown Voltage | $BV_{CBO}$ | $I_C$ = 1mA, $I_E$ = 0 | 700 | | | V |
| Collector Emitter Sustaining Voltage | $BV_{CEO}$ | $I_C$ = 5mA, $I_B$ = 0 | 400 | | | V |
| Collector Emitter Sustaining Voltage | $I_{CBO}$ | $V_{CB}$ = 700V, $R_{BE}$ = 0, $I_B$=0 | | | 100 | μA |
| * DC Current Gain | $I_{EBO}$ | $V_{EB}$ = 9V, $I_C$ = 0 | | | 10 | μA |
| | $h_{FE}$ | $V_{CE}$ = 5V, $I_C$ = 0.5A | 15 | | 40 | |
| | | $V_{CE}$ = 1V, $I_C$ = 3A | 8 | | | |
| * Collector Emitter Saturation Voltage | $V_{CE}$(sat) | $I_C$ = 1.3A, $I_B$ = 0.13A | | | 0.5 | V |
| | | $I_C$ = 3A, $I_B$ = 0.6A | | | 0.7 | V |
| * Base Emitter Saturation Voltage | $V_{BE}$(sat) | $I_C$=1.3A, $I_B$=0.13A | | | 1.1 | V |
| | | $I_C$=3A, $I_B$=0.6A | | | 1.25 | V |
| Output Capacitance | $C_{OB}$ | $V_{CB}$ = 10V, $I_E$ = 0, f = 1MHz | | 70 | 150 | pF |
| Turn On Time | $f_T$ | $V_{CC}$ = 125V, | | | 200 | ns |
| Storage Time | $t_{ON}$ | $I_C$ = 1A | | | 2 | μs |
| Fall Time | $t_{STG}$ | $I_B$1=0.2A, $I_B$2=-0.2A | | | 500 | ns |
| | $t_F$ | | | | | |

* Pulse Test: Pulse Width=5ms, Duty Cycle≤10%



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|---|---|---|
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