

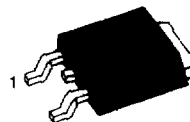
GENERAL PURPOSE POWER AND SWITCHING SUCH AS OUTPUT OR DRIVER STAGES IN APPLICATIONS D-PAK FOR SURFACE MOUNT APPLICATIONS

- Load Formed for Surface Mount Application(No Suffix)
- Straight Lead (I.PACK, *-1" Suffix)
- Electrically Similar to Popular KSE44H
- Fast Switching Speeds
- Low Collector Emitter Saturation Voltage

ABSOLUTE MAXIMUM RATINGS

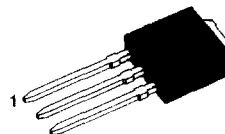
| Characteristic | Symbol | Rating | Unit |
|--|-----------|-----------|------------|
| Collector Emitter Voltage | V_{CEO} | 80 | V |
| Emitter Base Voltage | V_{EBO} | 5 | V |
| Collector Current (DC) | I_C | 8 | A |
| Collector Current (Pulse) | I_C | 16 | A |
| Collector Dissipation ($T_C=25^\circ C$) | P_C | 20 | W |
| Collector Dissipation ($T_A=25^\circ C$) | P_C | 1.75 | W |
| Junction Temperature | T_J | 150 | $^\circ C$ |
| Storage Temperature | T_{STG} | -65 ~ 150 | $^\circ C$ |

D-PAK



1. Base 2. Collector 3. Emitter

I-PAK



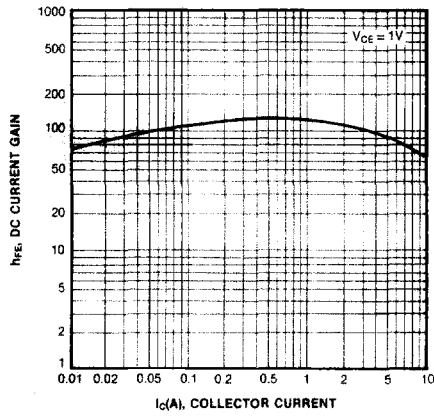
1. Base 2. Collector 3. Emitter

ELECTRICAL CHARACTERISTICS ($T_C=25^\circ C$)

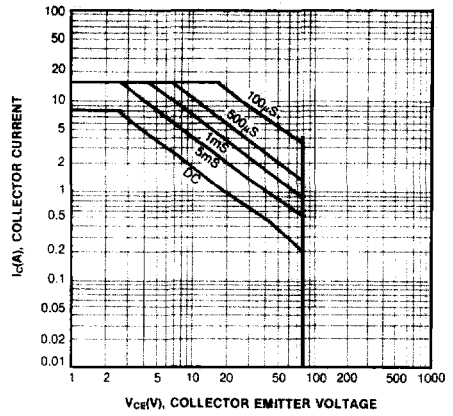
| Characteristic | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--|-----------------|---|-----|-----|-----|---------|
| * Collector Emitter Sustaining Voltage | $V_{CEO} (sus)$ | $I_C = 30mA, I_B = 0$ | 80 | | | V |
| Collector Cutoff Current | I_{CEO} | $V_{CE} = 80V, I_B = 0$ | | | 10 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{BE} = 5V, I_C = 0$ | | | 50 | μA |
| DC Current Gain | h_{FE} | $V_{CE} = 1V, I_C = 2A$ | 60 | | | |
| | | $V_{CE} = 1V, I_C = 4A$ | 40 | | | |
| Collector Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 8A, I_B = 0.4A$ | | | 1 | V |
| Base Emitter On Voltage | $V_{BE(on)}$ | $I_C = 8A, I_B = 0.8A$ | | | 1.5 | V |
| Current Gain Bandwidth Product | f_T | $V_{CE} = 10A, I_C = 0.5A$ $f = 20MHz$ | | 50 | | MHz |
| Collector Capacitance | C_{OB} | $V_{CB} = 10V, f = 1MHz$ | | 130 | | pF |
| Turn On Time | t_{ON} | $I_C = 5A, I_B1 = 0.5A$ | | 300 | | ns |
| Storage Time | t_{STG} | $I_B1 = I_B2 = 0.5A$ | | 500 | | ns |
| Fall Time | t_f | | | 140 | | ns |

* Pulse Test : $PW \leq 300\mu s$, Duty Cycle $\leq 2\%$

DC CURRENT GAIN



SAFE OPERATING AREA



POWER DERATING

