



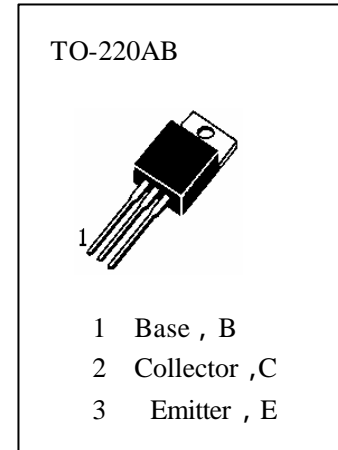
HEP41C

APPLICATIONS

Medium Power Linear Switching Application.

ABSOLUTE MAXIMUM RATINGS ($T_a=25$)

| | |
|---|---------|
| T_{stg} —Storage Temperature..... | -55~150 |
| T_j —Junction Temperature..... | 150 |
| P_C —Collector Dissipation ($T_c=25$) | 65W |
| P_C —Collector Dissipation($T_A=25$) | 2W |
| V_{CBO} —Collector-Base Voltage..... | 100V |
| V_{CEO} —Collector-Emitter Voltage..... | 100V |
| V_{EBO} —Emitter-Base Voltage..... | 5V |
| I_C —Collector Current..... | 6A |
| I_B —Base Current..... | 2A |



ELECTRICAL CHARACTERISTICS ($T_a=25$)

| Symbol | Characteristics | Min | Typ | Max | Unit | Test Conditions |
|----------------|---------------------------------------|-----|-----|-----|---------|---------------------------------|
| BV_{CEO} | Collector-Emitter Breakdown Voltage | 100 | | | V | $I_C=30mA, I_B=0$ |
| I_{CEO} | Collector Cut-off Current | | | 0.7 | mA | $V_{CE}=60V, I_B=0$ |
| I_{EBO} | Emitter Cut-off Current | | | 1 | mA | $V_{EB}=5V, I_C=0$ |
| I_{CES} | Collector Cut-off Current | | | 400 | μA | $V_{CE}=100V, V_{EB}=0$ |
| $H_{FE} (1)$ | DC Current Gain | 30 | | | | $V_{CE}=4V, I_C=0.3A$ |
| $H_{FE} (2)$ | DC Current Gain | 15 | | 75 | | $V_{CE}=4V, I_C=3A$ |
| $V_{CE(sat)}$ | Collector- Emitter Saturation Voltage | | | 1.5 | V | $I_C=6A, I_B=600mA$ |
| $V_{BE(on)}$ | Base-Emitter On Voltage | | | 2.0 | V | $V_{CE}=4V, I_C=6A$ |
| ft | Current Gain-Bandwidth Product | 3.0 | | | MHZ | $V_{CE}=10V, I_C=500mA, f=1MHz$ |

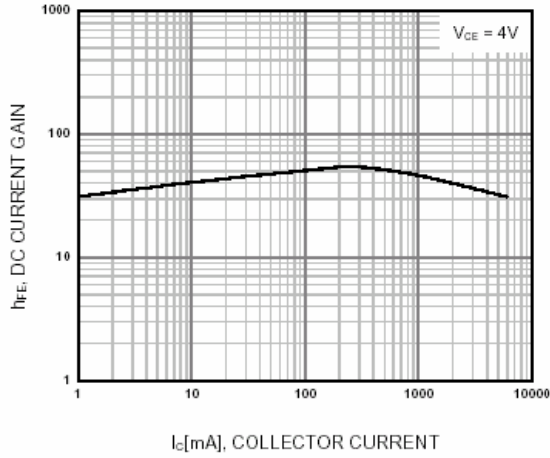


Figure 1. DC current Gain

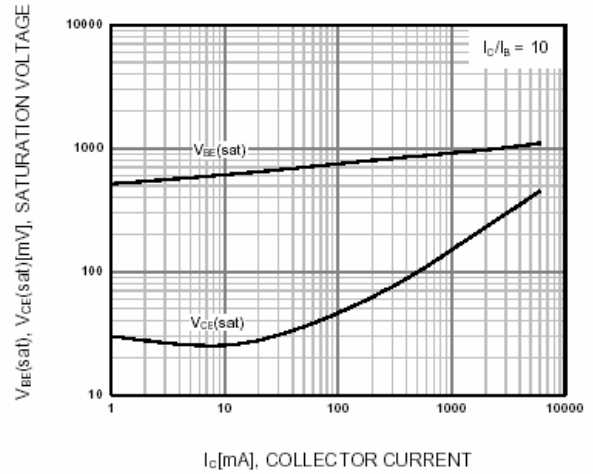


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

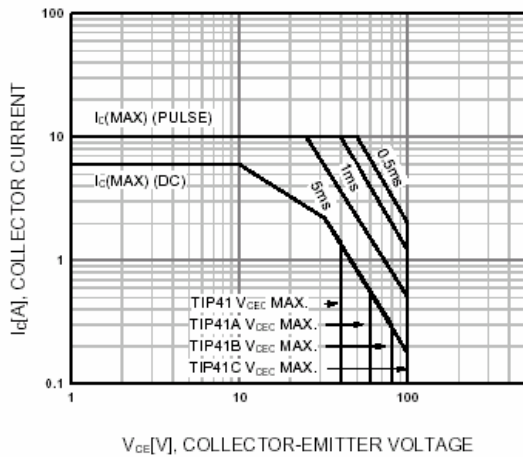


Figure 3. Safe Operating Area

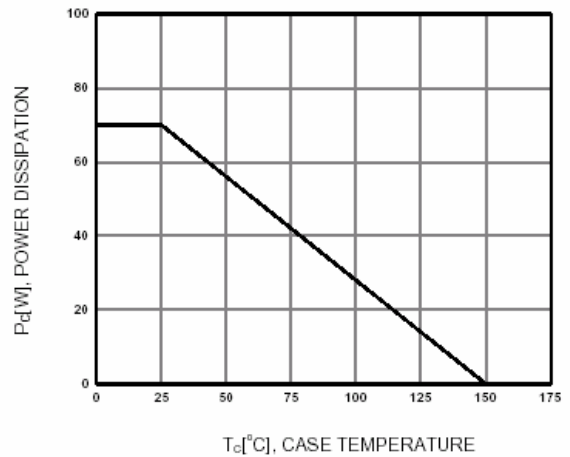


Figure 4. Power Derating