



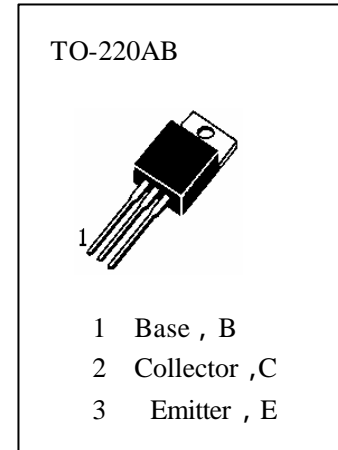
HEP41C

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	$V_{CE}=4V, I_C=6A$
f_T	Current Gain-Bandwidth Product	3.0			MHZ	$V_{CE}=10V, I_C=500mA, f=1MHz$

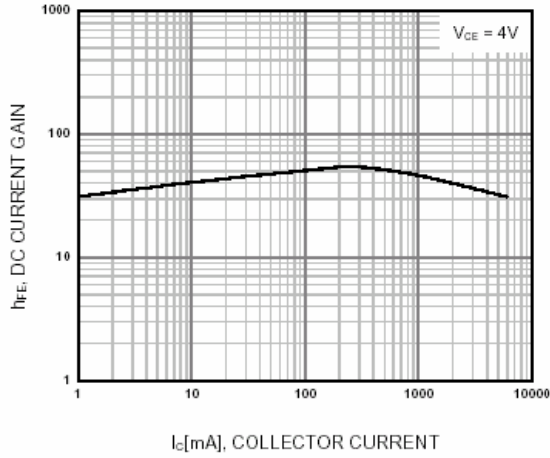


Figure 1. DC current Gain

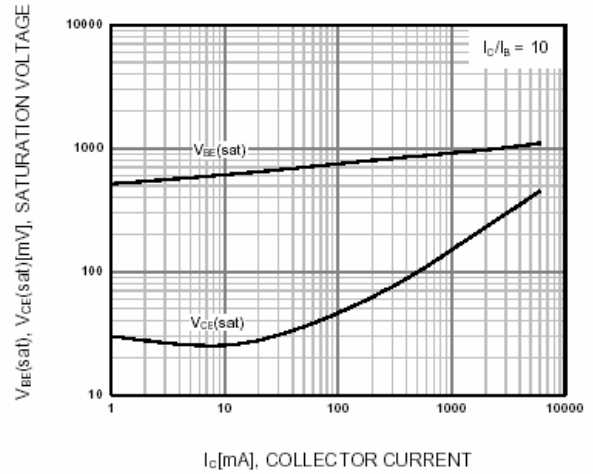


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

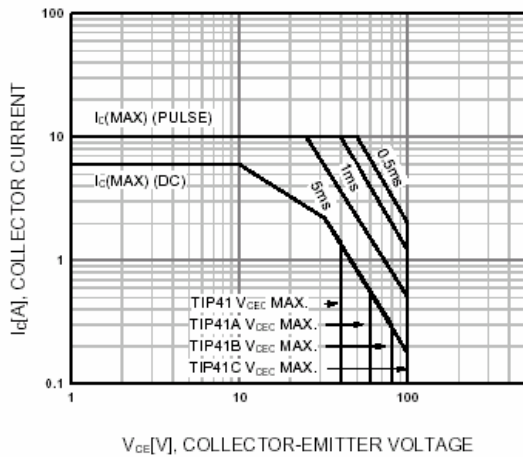


Figure 3. Safe Operating Area

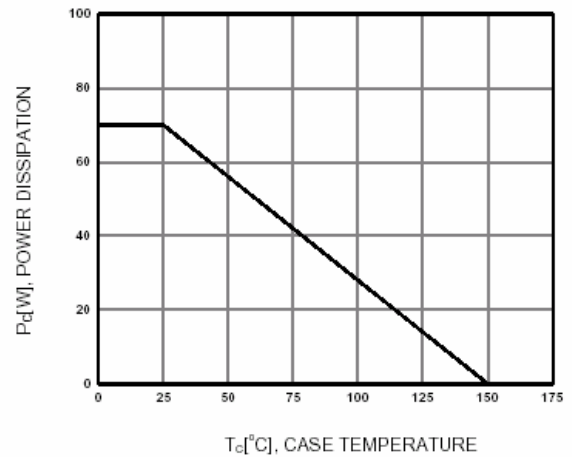


Figure 4. Power Derating