



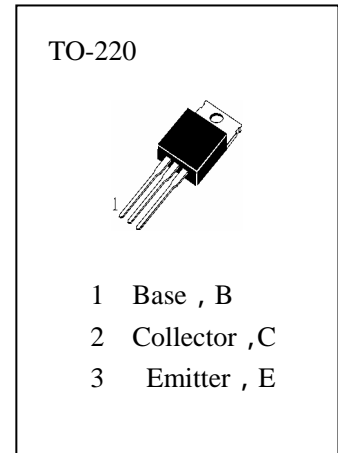
HP42C

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	$V_{CE}=-10V, I_C=-500mA, f=1MHZ$

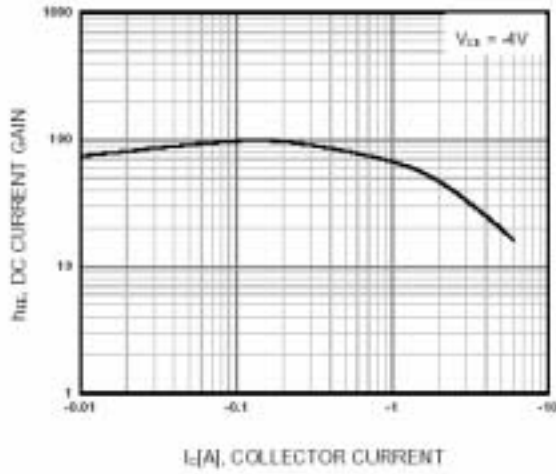
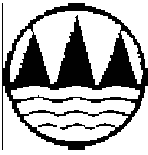


Figure 1. DC current Gain

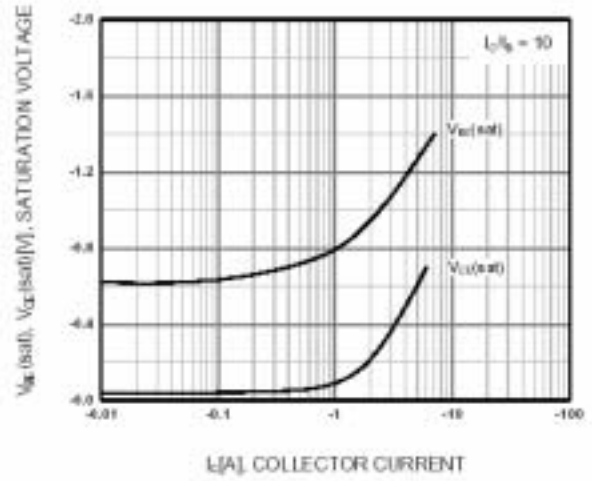


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

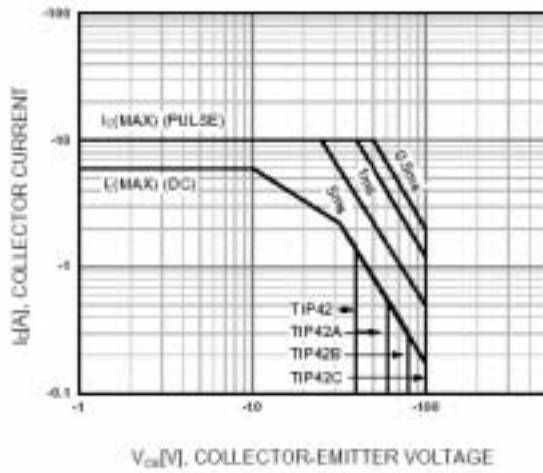


Figure 3. Safe Operating Area

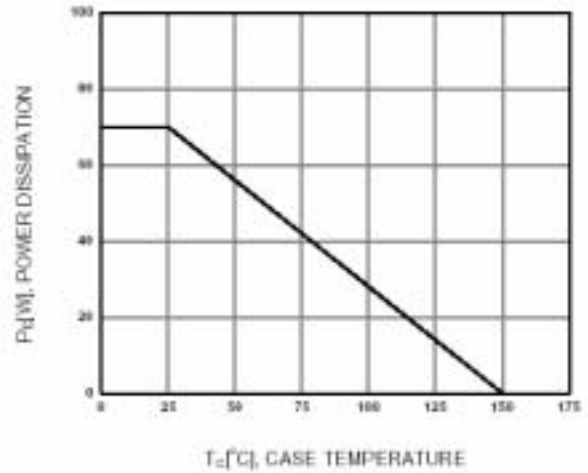


Figure 4. Power derating