

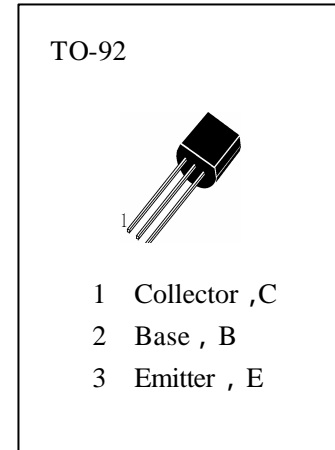


APPLICATIONS

Switching and Applications.

ABSOLUTE MAXIMUM RATINGS ($T_a=25$)

T_{stg}	—Storage Temperature.....	-55~150
T_j	—Junction Temperature.....	150
P_C	—Collector Dissipation.....	500mW
V_{CBO}	—Collector-Base Voltage	30V
V_{CEO}	—Collector-Emitter Voltage.....	30V
V_{EBO}	—Emitter-Base Voltage.....	5V
I_C	—Collector Current.....	100mA



ELECTRICAL CHARACTERISTICS ($T_a=25$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BVCBO	Collector-Base Breakdown Voltage	30			V	$I_C=100 \mu A, I_E=0$
BVCEO	Collector-Emitter Breakdown Voltage	30			V	$I_C=1mA, I_B=0$
BVEBO	Emitter-Base Breakdown Voltage	5			V	$I_E=1mA, I_C=0$
ICBO	Collector Cut-off Current			15	nA	$V_{CB}=30V, I_E=0$
HFE	DC Current Gain	110		800		$V_{CE}=5V, I_C=2mA$
$V_{CE(sat1)}$	Collector- Emitter Saturation Voltage		90	250	mV	$I_C=10mA, I_B=0.5mA$
$V_{CE(sat2)}$			200	600	mV	$I_C=100mA, I_B=5mA$
$V_{BE(sat1)}$	Base-Emitter Saturation Voltage		0.7	1	V	$I_C=10mA, I_B=0.5mA$
$V_{BE(sat2)}$			0.9	1.2	V	$I_C=100mA, I_B=5mA$
$V_{BE(on)}$	Base-Emitter On Voltage	580	660	700	mV	$V_{CE}=5V, I_C=2mA$
ft	Current Gain-Bandwidth Product		300		MHz	$V_{CE}=5V, I_C=10mA$
Cob	Output Capacitance		2.5		pF	$V_{CB}=10V, I_E=0, f=1MHz$
NF	Noise Figure		1.2	4	dB	$V_{CE}=5V, I_C=0.2mA, f=1KHz, R_G=2KO$

h_{FE} Classification

A	B	C
110—220	200—450	420—800

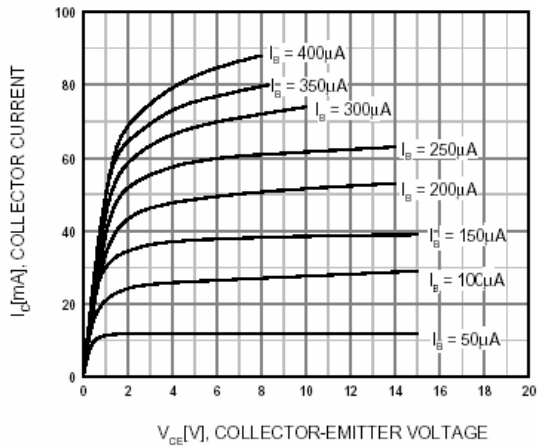


Figure 1. Static Characteristic

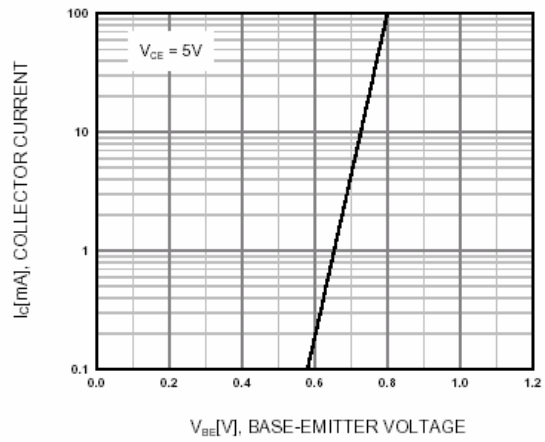


Figure 2. Transfer Characteristic

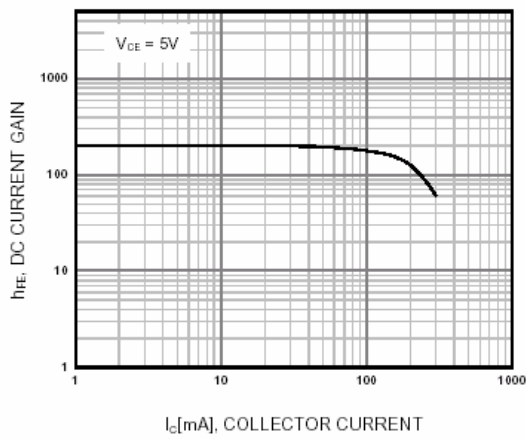


Figure 3. DC current Gain

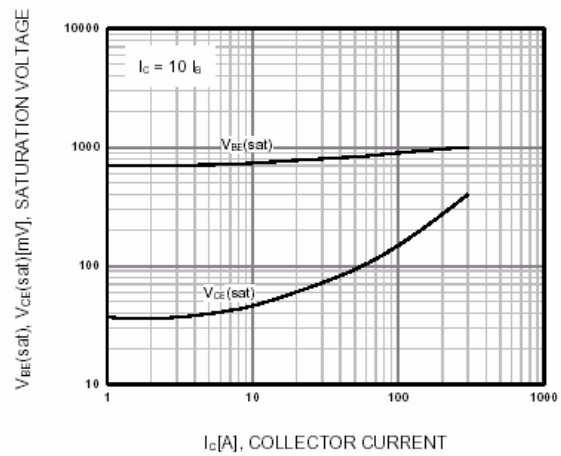


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

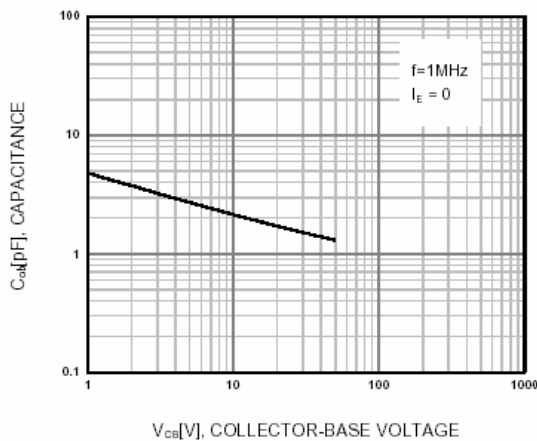


Figure 5. Output Capacitance

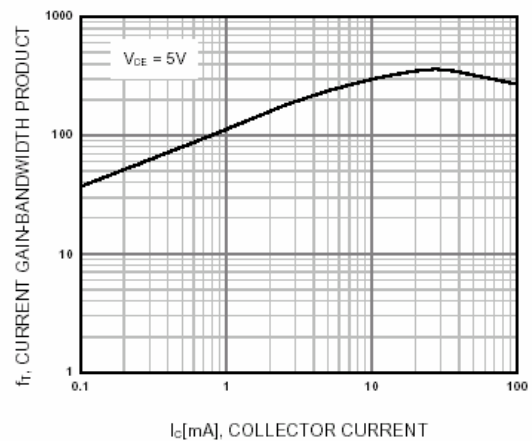


Figure 6. Current Gain Bandwidth Product