



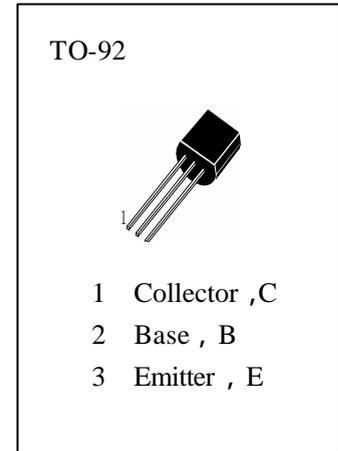
**APPLICATIONS**

SWITCHING AND AMPLIFIER

**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

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**ELECTRICAL CHARACTERISTICS (  $T_a=25$  )**

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
$BV_{CBO}$	Collector-Base Breakdown Voltage	-30			V	$I_C=-100\mu A, I_E=0$
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	-30			V	$I_C=-10mA, I_B=0$
$BV_{EBO}$	Emitter-Base Breakdown Voltage	-5			V	$I_E=-100\mu A, I_C=0$
$I_{CBO}$	Collector Cut-off Current			-15	nA	$V_{CB}=-30V, I_E=0$
$h_{FE}$	DC Current Gain	110		800		$V_{CE}=-5V, I_C=-2mA$
$V_{CE(sat1)}$	Collector- Emitter Saturation Voltage		-90	-300	mV	$I_C=-10mA, I_B=-0.5mA$
$V_{CE(sat2)}$			-250	-650	mV	$I_C=-100mA, I_B=-5mA$
$V_{BE(sat1)}$	Base-Emitter Saturation Voltage		-0.7		V	$I_C=-10mA, I_B=-0.5mA$
$V_{BE(sat2)}$			-0.9		V	$I_C=-100mA, I_B=-5mA$
$V_{BE(ON1)}$	Base-Emitter On Voltage		-660	-750	mV	$V_{CE}=-5V, I_C=-2mA$
$V_{BE(ON2)}$				-800	mV	$V_{CE}=-5V, I_C=-10mA$
$f_T$	Current Gain-Bandwidth Product		150		MHz	$V_{CE}=-5V, I_C=-10mA, f=1MHz$
$C_{ob}$	Output Capacitance			6	pF	$V_{CB}=-10V, I_E=0, f=1MHz$

**$h_{FE}$  Classification**

A	B	C
110—220	200—450	420—800

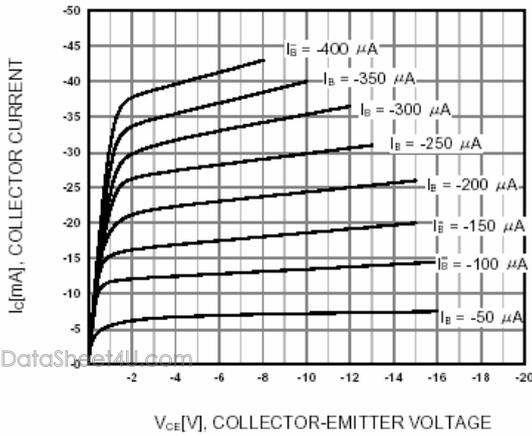


Figure 1. Static Characteristic

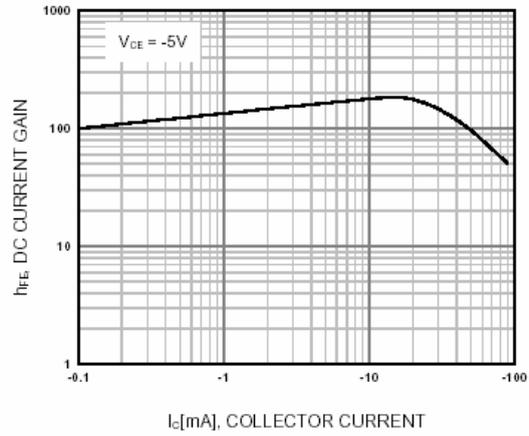


Figure 2. DC current Gain

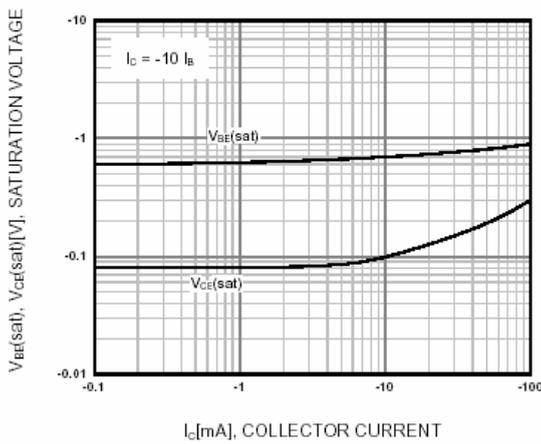


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

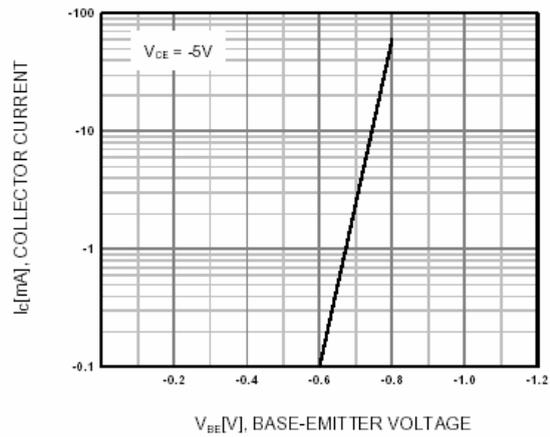


Figure 4. Base-Emitter On Voltage

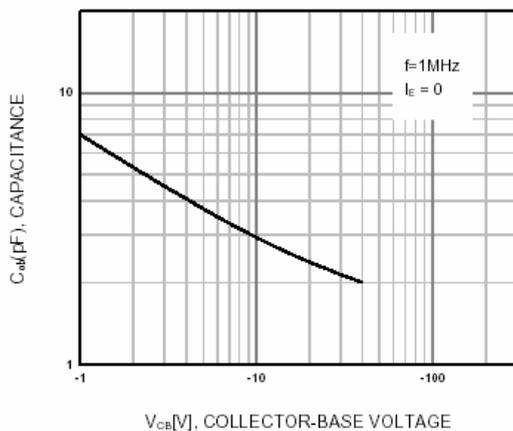


Figure 5. Collector Output Capacitance

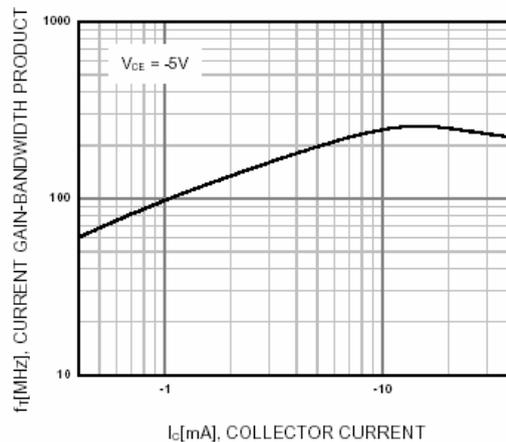


Figure 6. Current Gain Bandwidth Product