

TO-92 Plastic-Encapsulate Transistors

FEATURES

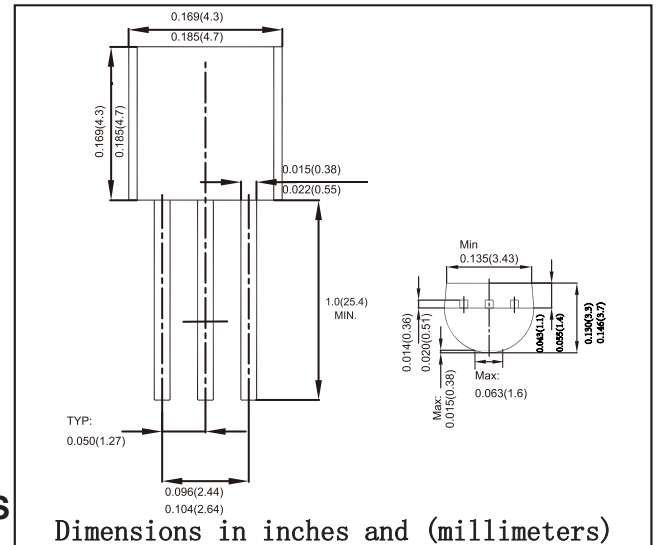
- Switching and amplification in high voltage
- Applications such as telephony
- Low current
- High voltage
- NPN Transistors

MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any

MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

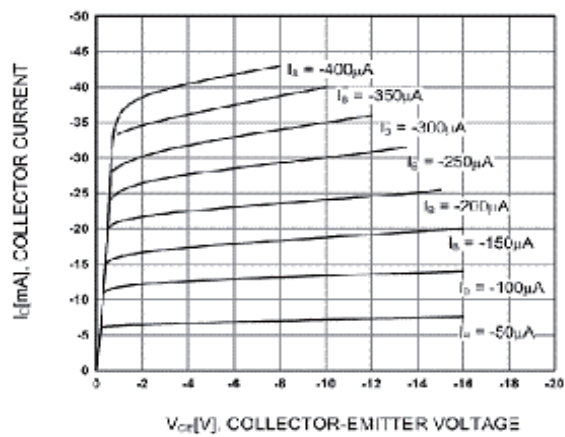


Parameter	Symbol	Value	Units
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current -Continuous	I_C	-100	mA
Total Device Dissipation	P_D	250	mW
Junction Temperature	T_J	150	°C
Junction and Storage Temperature	T_{stg}	-55-150	°C

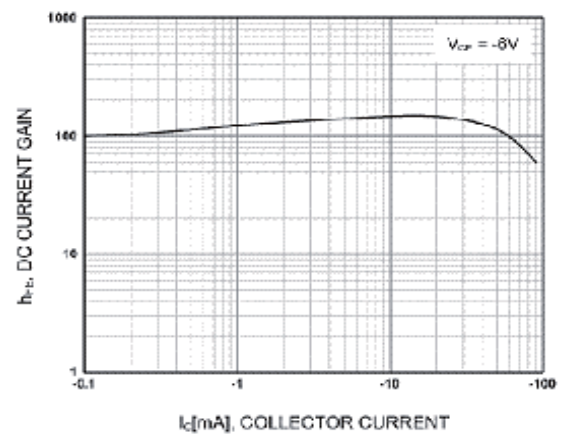
* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V(BR)_{CBO}$	$I_C = -50\mu A, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	$I_C = -1mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	$I_C = -50\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -60V, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -6V, I_C = -1mA$	90	200	600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA$		-0.18	-0.3	V
Base-emitter voltage	V_{BE}	$V_{CE} = -6V, I_C = -1.0mA$	-0.58	-0.62	-0.68	V
Transition frequency	f_T	$V_{CE} = -6V, I_C = -10mA$	100	180		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		4.5	6	pF
Noise figure	NF	$V_{CE} = -6V, I_C = -0.3mA, R_g = 10k\Omega, f = 100Hz$		6	20	dB

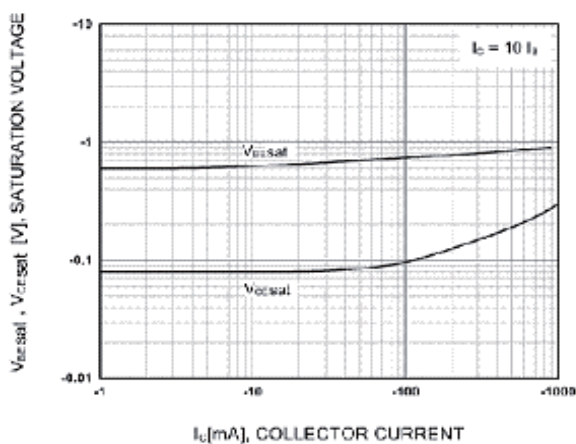
RATINGS AND CHARACTERISTIC CURVES



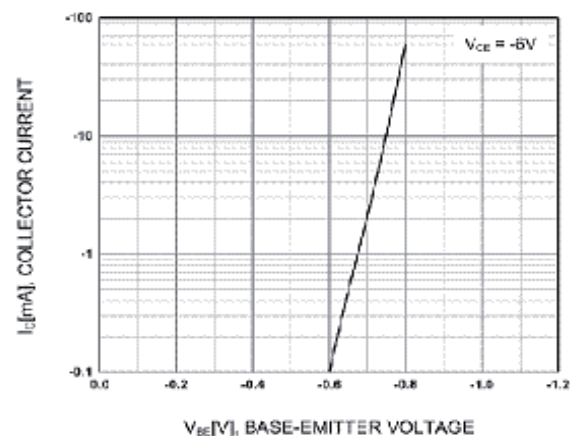
Static Characteristic



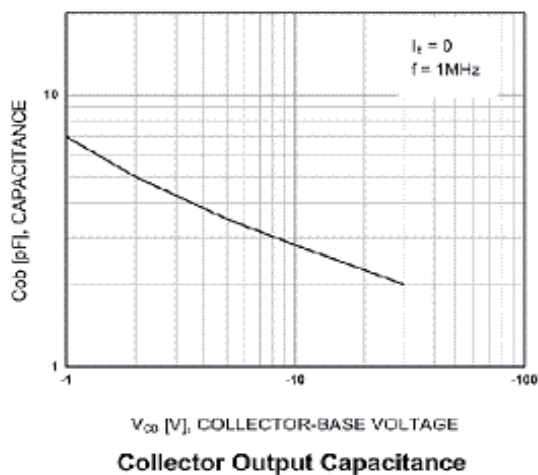
DC current Gain



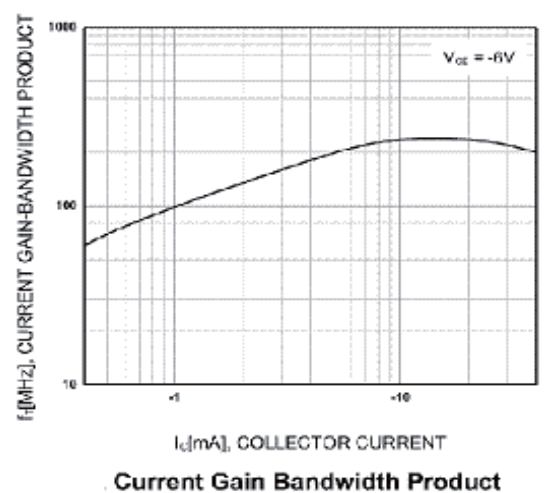
**Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage**



Base-Emitter On Voltage



Collector Output Capacitance



Current Gain Bandwidth Product