

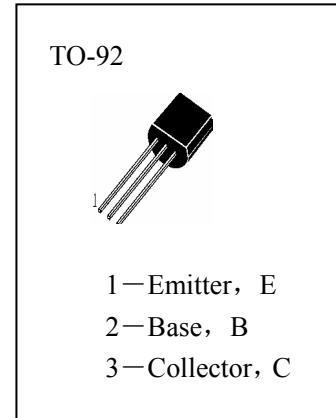


NPN EPITAXIAL SILICON TRANSISTOR

2W OUTPUT AMPLIFIER OF PORTABLE RADIOS IN CLASS
B PUSH-PULL OPERATION.

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

- T_{stg}—Storage Temperature..... -55~150°C
- T_j—Junction Temperature.....150°C
- P_C—Collector Dissipation.....1W
- V_{CBO}—Collector-Base Voltage.....40V
- V_{CEO}—Collector-Emitter Voltage.....25V
- V_{EBO}—Emitter-Base Voltage.....6V
- I_C—Collector Current.....1.5A



ELECTRICAL CHARACTERISTICS (T_a=25°C)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
I _{CBO}	Collector Cut-off Current			0.1	μ A	V _{CB} =35V, I _E =0
I _{EBO}	Emitter Cut-off Current			0.1	μ A	V _{EB} =6V, I _C =0
H _{FE}	DC Current Gain	85		500		V _{CE} =1V, I _C =100mA
		40				V _{CE} =1V, I _C =800mA
V _{BE}	Base- Emitter Voltage			1	V	V _{CE} =1V, I _C =10mA
V _{CE(sat)}	Collector- Emitter Saturation Voltage			0.5	V	I _C =800mA, I _B =80mA
V _{BE(sat)}	Base- Emitter Saturation Voltage			1.2	V	I _C =800mA, I _B =80mA
BV _{CBO}	Collector-Base Breakdown Voltage	40			V	I _C =100 μ A, I _E =0
BV _{CEO}	Collector-Emitter Breakdown Voltage	25			V	I _C =2mA, I _B =0
BV _{EBO}	Emitter- Base Breakdown Voltage	6			V	I _E =100 μ A, I _C =0
C _{ob}	Output Capacitance		9.0		pF	V _{CB} =10V, I _E =0, f=1MHz
f _T	Current Gain-Bandwidth Product	100			MHz	V _{CE} =10V, I _C =50mA

h_{FE} Classification

B	C	D	E
85—160	120—200	160—300	270—500



Typical Characteristics

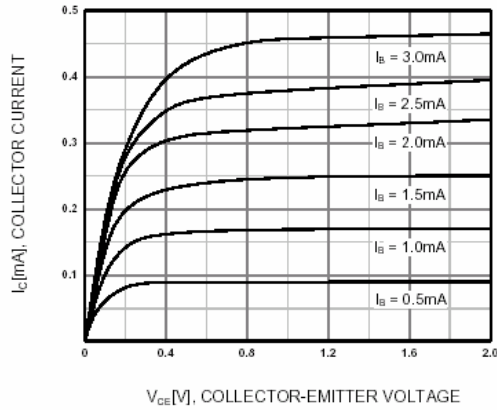


Figure 1. Static Characteristic

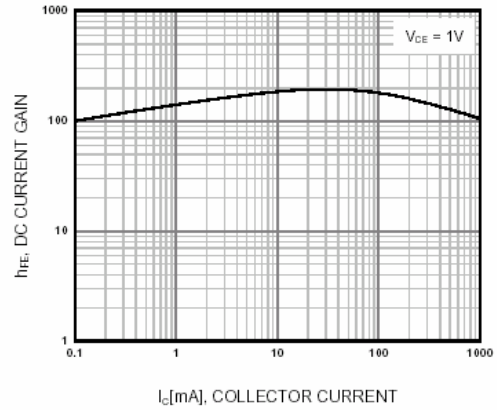


Figure 2. DC current Gain

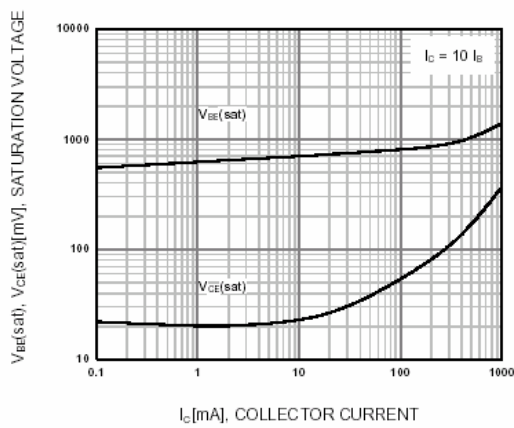


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

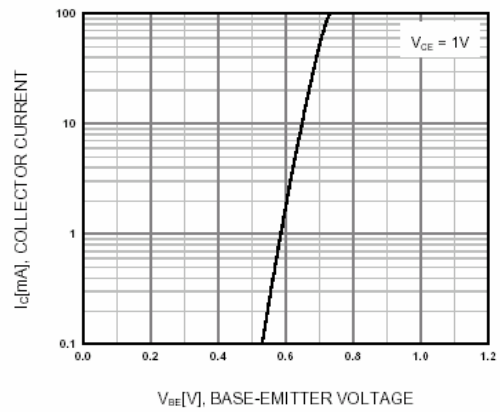


Figure 4. Base-Emitter On Voltage

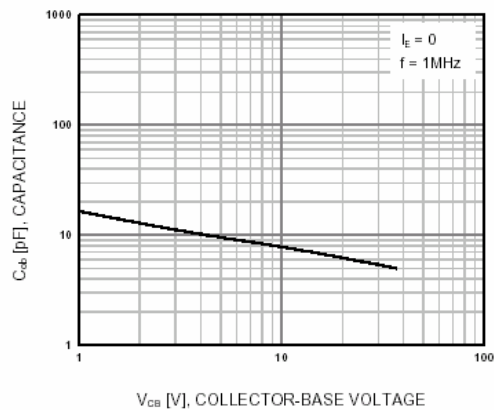


Figure 5. Collector Output Capacitance

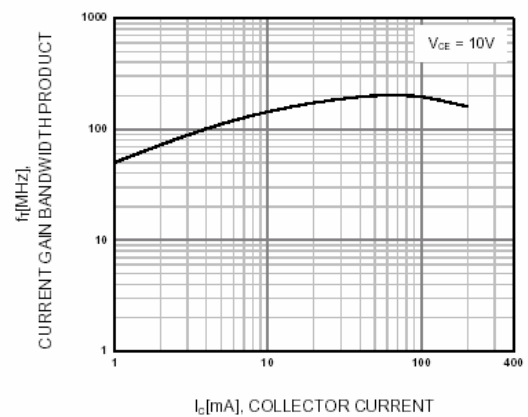


Figure 6. Current Gain Bandwidth Product