Shantou Huashan Electronic Devices Co.,Ltd.

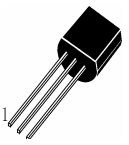
NPN SILICON TRANSISTOR

H1616

APPLICATIONS

Audio frequency power Aamplifier& Medium
Speed switching Low frequency power amplifier.

TO-92



1—Emitter，E
2—Collector，C
3—Base，B

ABSOLUTE MAXIMUM RATINGS（T_a=25℃）

T_{stg}——Storage Temperature····· -55~150℃

T_j——Junction Temperature·····150℃

P_C——Collector Dissipation·····750mW

V_{CBO}——Collector-Base Voltage·····60V

V_{CEO}——Collector-Emitter Voltage·····50V

V_{EBO}——Emitter-Base Voltage·····6V

I_C——Collector Current·····1A

I_{CP}——Collector Current（Pulse）·····2A

ELECTRICAL CHARACTERISTICS（T_a=25℃）

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CBO}	Collector-Base Breakdown Voltage	60			V	I_C=10μA，I_E=0
BV_{CEO}	Collector-Emitter Breakdown Voltage	50			V	I_C=1mA，I_B=0
BV_{EBO}	Emitter-Base Breakdown Voltage	6			V	I_E=10μA，I_C=0
I_{CBO}	Collector Cut-off Current			100	nA	V_{CB}=60V，I_E=0
I_{EBO}	Emitter Cut-off Current			100	nA	V_{EB}=6V，I_C=0
H_{FE}（1）	DC Current Gain	135		600		V_{CE}=2V，I_C=100mA
H_{FE}（2）	DC Current Gain	81				V_{CE}=2V，I_C=1A
$V_{CE(sat)}$	Collector- Emitter Saturation Voltage		0.15	0.3	V	I_C=1A，I_B=50mA
$V_{BE(sat)}$	Base-Emitter Saturation Voltage		0.9	1.2	V	I_C=1A，I_B=50mA
$V_{BE(on)}$	Base-Emitter On Voltage	600	640	700	mV	V_{CE}=2V，I_C=50mA
f_T	Current Gain-Bandwidth Product	100	160		MHz	V_{CE}=2V，I_C=100mA
Cob	Output Capacitance		19		pF	V_{CB}=10V，I_E=0，f=1MHz

h_{FE} Classification

Y	G	L
135—270	200—400	300—600

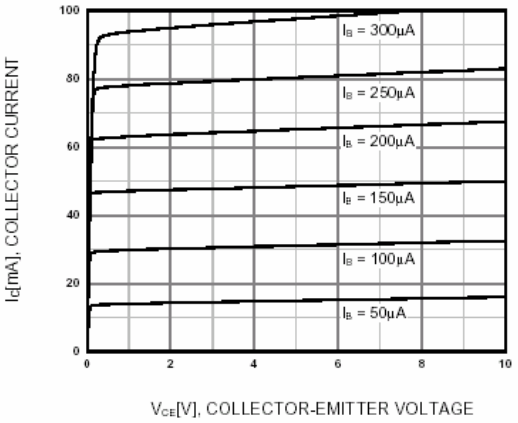


Figure 1. Static Characteristic

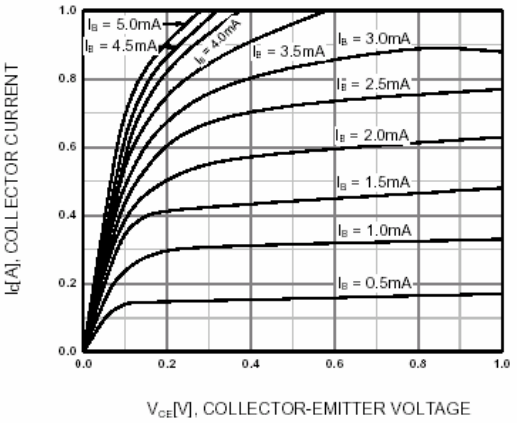


Figure 2. Static Characteristic

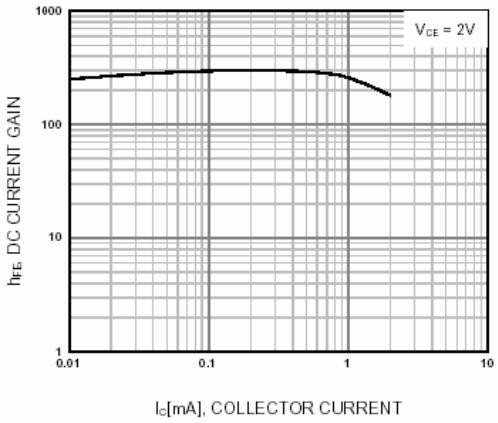


Figure 3. DC current Gain

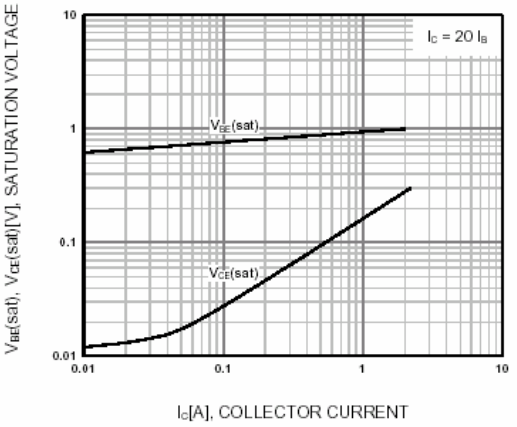


Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

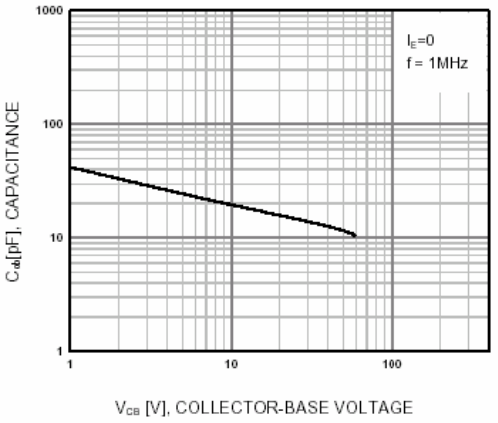


Figure 5. Collector Output Capacitance

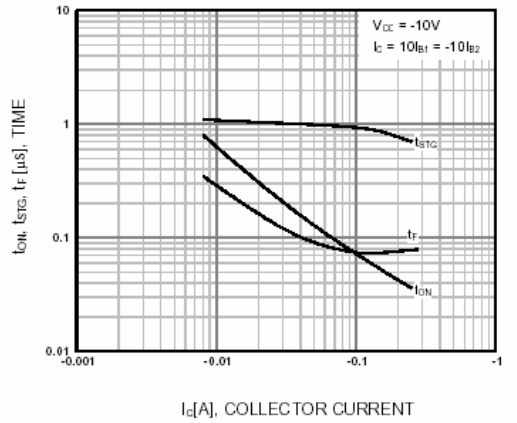


Figure 6. Switching Time

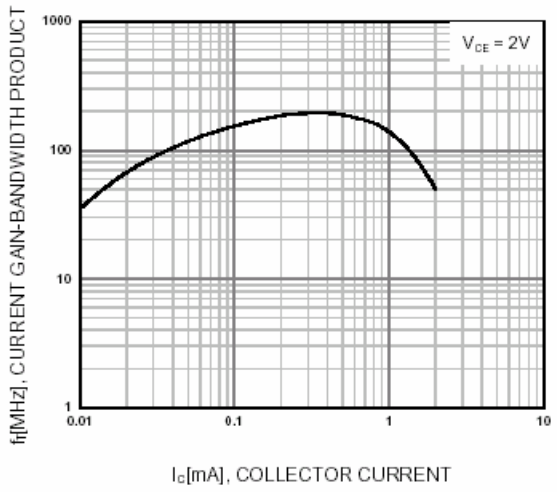


Figure 7. Current Gain Bandwidth Product

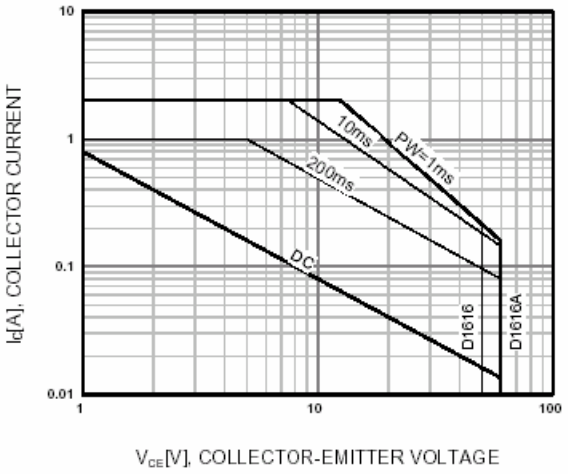


Figure 8. Safe Operating Area

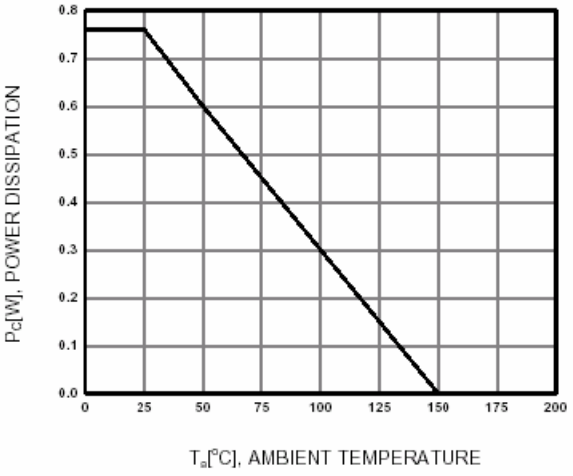


Figure 9. Power Derating