

Shantou Huashan Electronic Devices Co.,Ltd.

NPN SILICON TRANSISTOR

H639

APPLICATIONS

Switching And Amplifier Application.

ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$)

T_{stg} —Storage Temperature..... $-55\sim 150^{\circ}\text{C}$

T_j —Junction Temperature..... 150°C

P_C —Collector Dissipation..... 1W

V_{CBO} —Collector-Base Voltage..... 100V

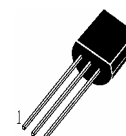
V_{CEO} —Collector-Emitter Voltage..... 80V

V_{EBO} —Emitter-Base Voltage..... 5V

I_C —Collector Current..... 1A

I_b —Base Current..... 100mA

TO-92



1—Emitter, E
2—Collector, C
3—Base, B

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BVC_{BO}	Collector-Base Breakdown Voltage	80			V	$I_C=10\text{mA}$, $I_E=0$
$H_{FE}(1)$	DC Current Gain	25				$V_{CE}=2\text{V}$, $I_C=5\text{mA}$
$H_{FE}(2)$	DC Current Gain	40		250		$V_{CE}=2\text{V}$, $I_C=150\text{mA}$
$H_{FE}(3)$	DC Current Gain	25				$V_{CE}=2\text{V}$, $I_C=500\text{mA}$
$V_{CE(sat)}$	Collector- Emitter Saturation Voltage			0.5	V	$I_C=500\text{mA}$, $I_B=50\text{mA}$
$V_{BE(on)}$	Base-Emitter On Voltage			1	V	$V_{CE}=2\text{V}$, $I_C=500\text{mA}$
I_{CBO}	Collector Cut-off Current			100	nA	$V_{CB}=30\text{V}$, $I_E=0$
I_{EBO}	Emitter Cut-off Current			100	nA	$V_{EB}=5\text{V}$, $I_C=0$
f_T	Current Gain-Bandwidth Product		100		MHz	$V_{CE}=5\text{V}$, $I_C=10\text{mA}$, $f=50\text{MHz}$

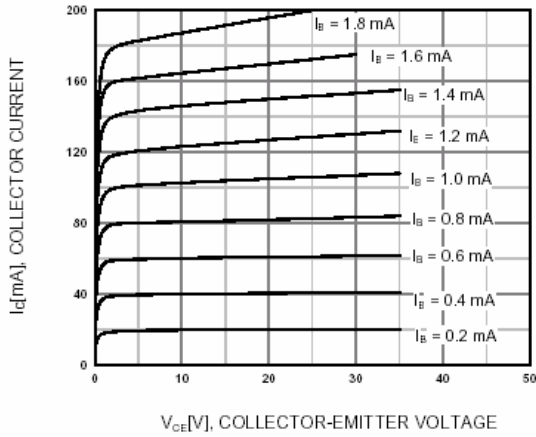


Figure 1. Static Characteristic

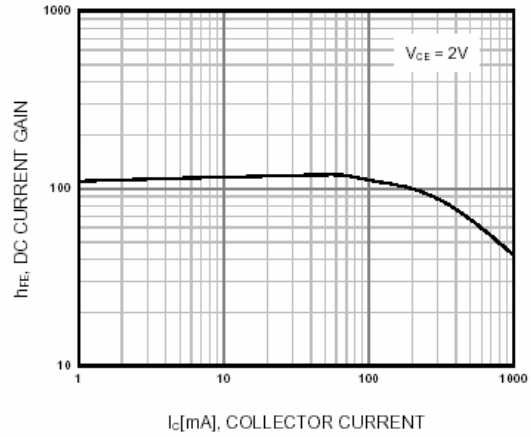


Figure 2. DC current Gain

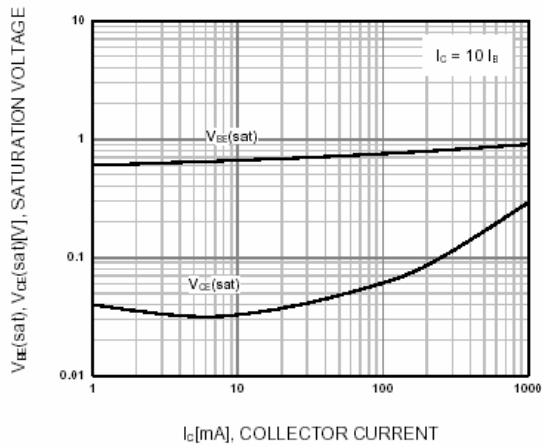


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

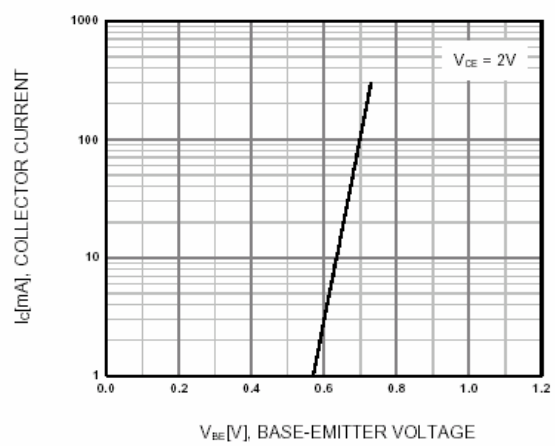


Figure 4. Base-Emitter On Voltage

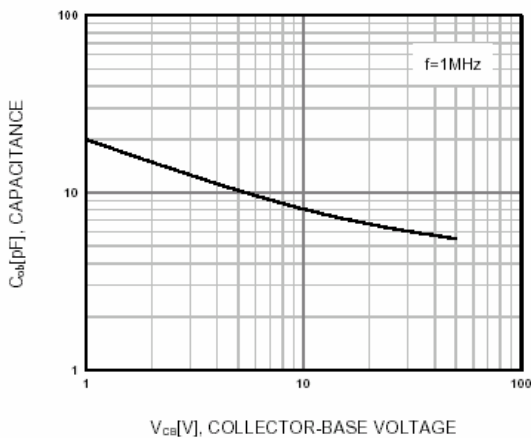


Figure 5. Collector Output Capacitance