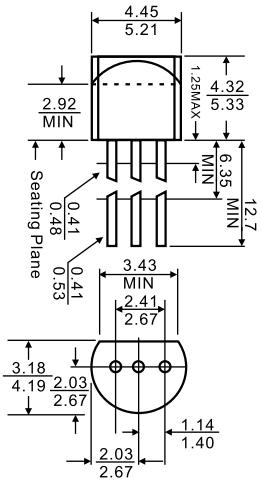
BC635/637/639(NPN)

RoHS COMPLIANT

TO-92 Bipolar Transistors

1. EMITTER
2. COLLECTOR
3. BASE

TO-92



Dimensions in inches and (millimeters)

Features

✧ High current transistors

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter		Value	Units
V_{CBO}	Collector-Emitter Voltage	BC635	45	V
		BC637	60	V
		BC639	100	V
V_{CEO}	Collector-Emitter Voltage	BC635	45	V
		BC637	60	V
		BC639	80	V
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current -Continuous		1	A
P_C	Collector Power Dissipation		0.625	W
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature		-65-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0	BC635	45			V
			BC637	60			V
			BC639	80			V
Collector cut-off current	I_{CBO}	V_{CB}= 30 V,I_E=0				0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_B=0				0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=2 V, I_C= 5mA		25			
	$h_{FE(2)}$	V_{CE}=2V, I_C=150mA	BC635	40		250	
			BC637-10/BC639-10	63		160	
			BC637-16/BC639-16	100		250	
	$h_{FE(3)}$	V_{CE}=2V, I_C= 500mA		25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA, I_B=50mA				0.5	V
Base-emitter voltage	V_{BE}	V_{CE}=2V, I_C=500mA				1	V
Transition frequency	f_T	V_{CE}=5V, I_C=10mA,f= 50 MH_Z			100		MHz

Typical Characteristics

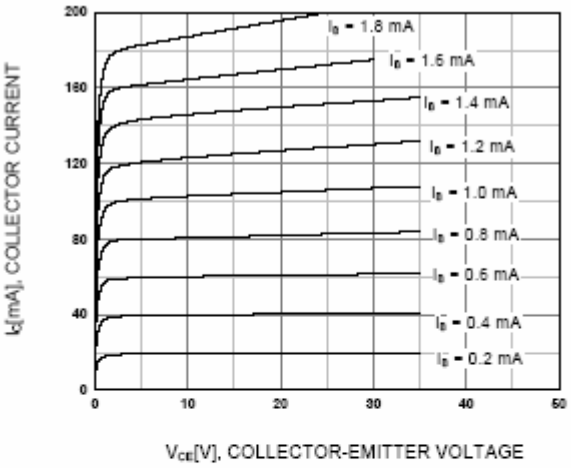


Figure 1. Static Characteristic

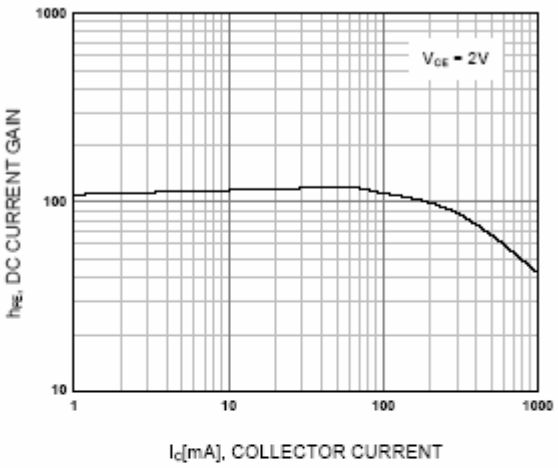


Figure 2. DC current Gain

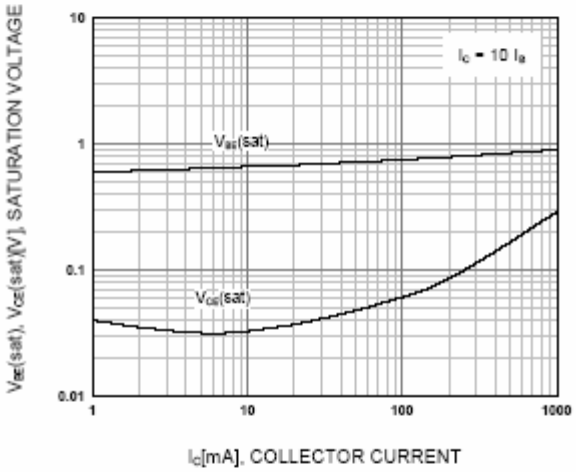


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

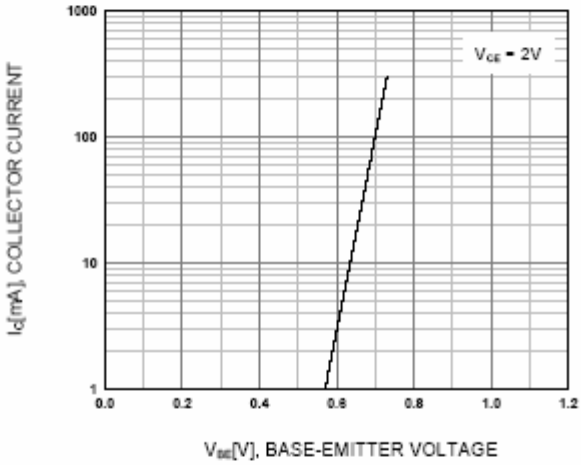


Figure 4. Base-Emitter On Voltage

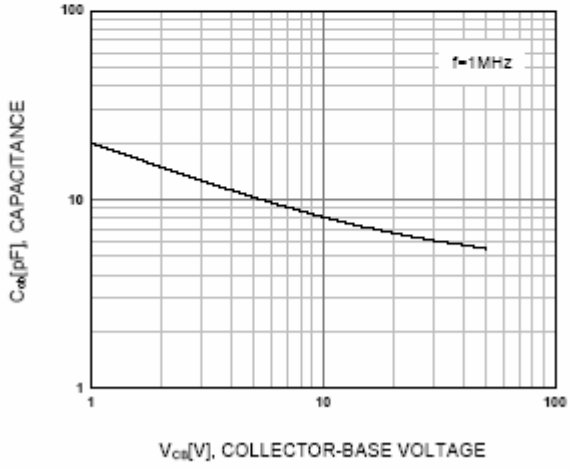


Figure 5. Collector Output Capacitance