

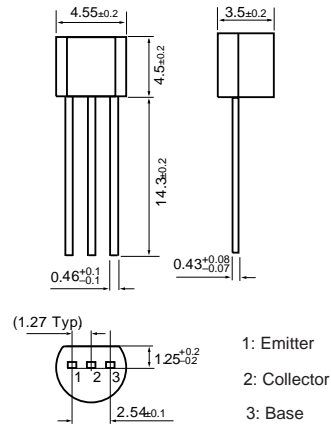
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

TO-92

**FEATURE**

High current transistor



**MAXIMUM RATINGS** (TA=25 °C unless otherwise specified)

PARAMETERS		SYMBOLS	VALUES	UNIT
Collector - Emitter Voltage	BC635	$V_{CEO}$	45	V
	BC637		60	V
	BC639		80	V
Collector - Base Voltage	BC635	$V_{CBO}$	45	V
	BC637		60	V
	BC639		100	V
Emitter - Base Voltage		$V_{EBO}$	5	V
Collector Current - Continuous		$I_C$	1	A
Collector Power Dissipation		$P_C$	0.625	W
Junction, Storage Temperature		$T_J, T_{STG}$	150, -65 ~ 150	°C

**ELECTRICAL CHARACTERISTICS** (TA=25 °C unless otherwise specified)

PARAMETERS	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	$I_{CBO}$	$V_{CB}=30V, I_E=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_B=0$			0.1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE}=2V, I_C=5mA$	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	$f_T$	$V_{CE}=5V, I_C=10mA, f=50MHz$		100		MHz

**CLASSIFICATION OF  $h_{FE(2)}$**

RANK	BC635	BC637-10, BC639-10	BC637-16, BC639-16
RANGE	40-250	63-160	100-250

Any changing of specification will not be informed individual

**Typical Characteristics**

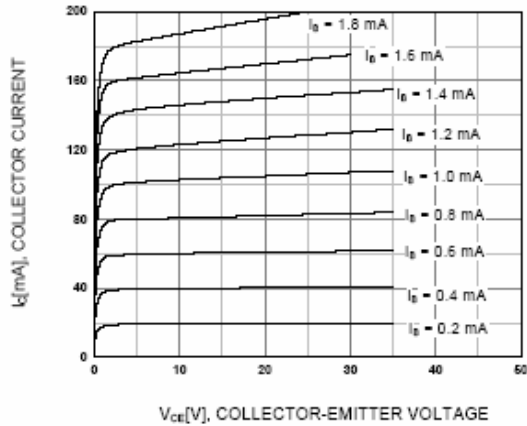


Figure 1. Static Characteristic

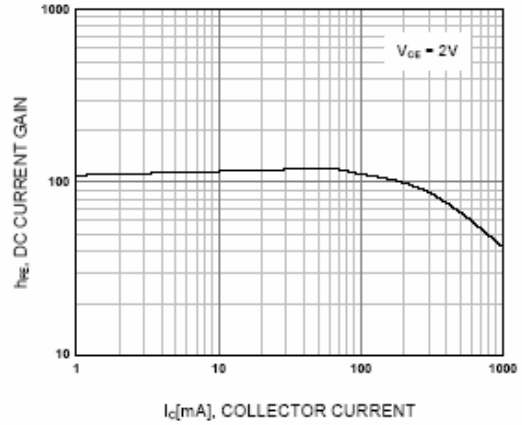


Figure 2. DC current Gain

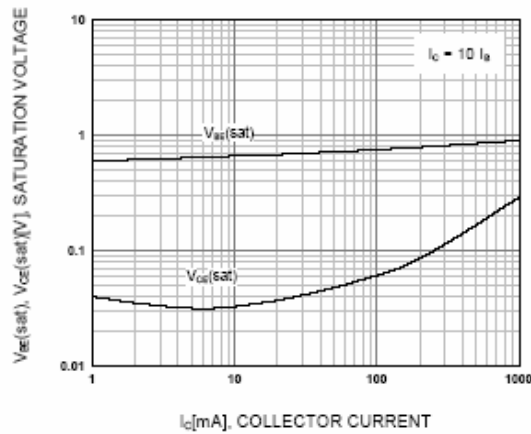


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

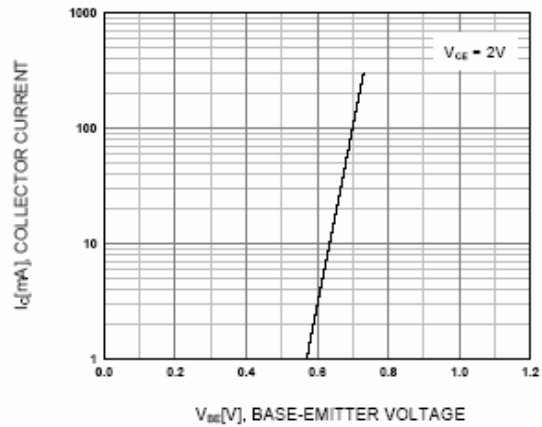


Figure 4. Base-Emitter On Voltage

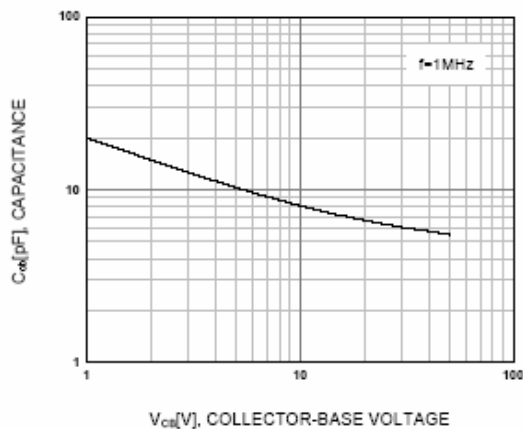


Figure 5. Collector Output Capacitance