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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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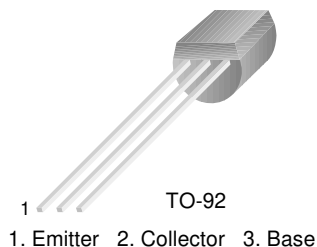
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



BC635/637/639

Switching and Amplifier Applications

- Complement to BC636/638/640



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CER}	Collector-Emitter Voltage at $R_{\text{BE}}=1\text{K}\Omega$		
	: BC635	45	V
	: BC637	60	V
	: BC639	100	V
V_{CES}	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	1	A
I_{CP}	Peak Collector Current	1.5	A
I_{B}	Base Current	100	mA
P_{C}	Collector Power Dissipation	1	W
T_{J}	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-65 ~ 150	$^\circ\text{C}$

• PW=5ms, Duty Cycle=10%

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_{\text{C}}=10\text{mA}, I_{\text{B}}=0$				
	: BC635		45			V
	: BC637		60			V
	: BC639		80			V
I_{CBO}	Collector Cut-off Current	$V_{\text{CB}}=30\text{V}, I_{\text{E}}=0$			0.1	μA
I_{EBO}	Emitter Cut-off Current	$V_{\text{EB}}=5\text{V}, I_{\text{C}}=0$			0.1	μA
h_{FE1}	DC Current Gain	: All	25			
h_{FE2}		: BC635	40		250	
		: BC637/BC639	40		160	
h_{FE3}		: All	25			
$V_{\text{CE(sat)}}$	Collector-Emitter Saturation Voltage	$I_{\text{C}}=500\text{mA}, I_{\text{B}}=50\text{mA}$			0.5	V
$V_{\text{BE(on)}}$	Base-Emitter On Voltage	$V_{\text{CE}}=2\text{V}, I_{\text{C}}=500\text{mA}$			1	V
f_{T}	Current Gain Bandwidth Product	$V_{\text{CE}}=5\text{V}, I_{\text{C}}=10\text{mA}, f=50\text{MHz}$		100		MHz

Typical Characteristics

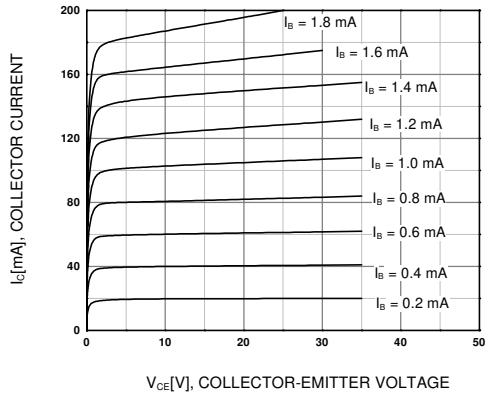


Figure 1. Static Characteristic

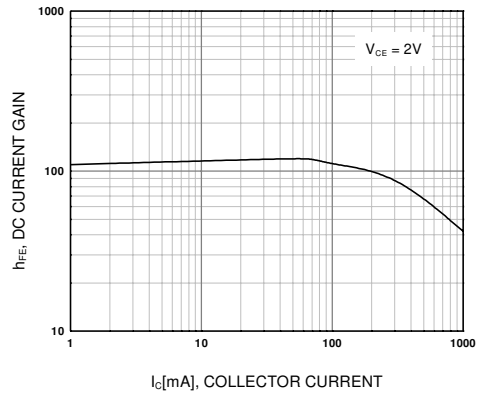


Figure 2. DC current Gain

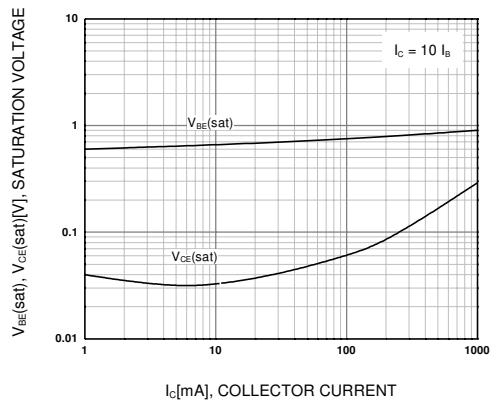


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

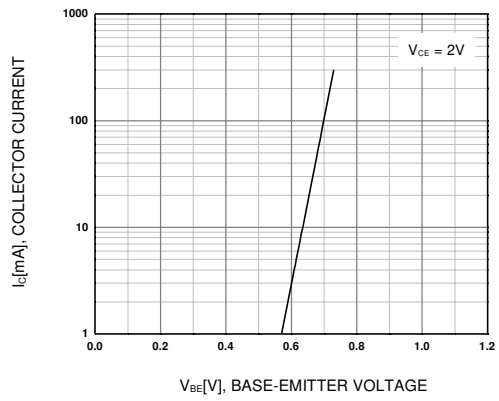


Figure 4. Base-Emitter On Voltage

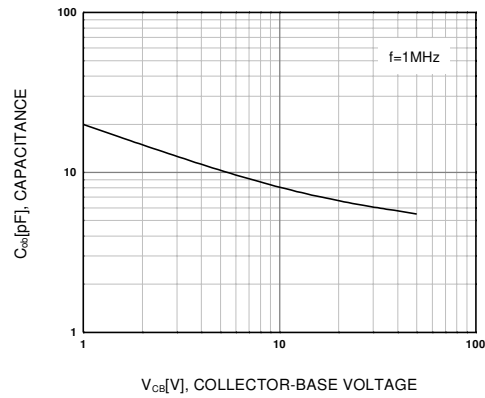
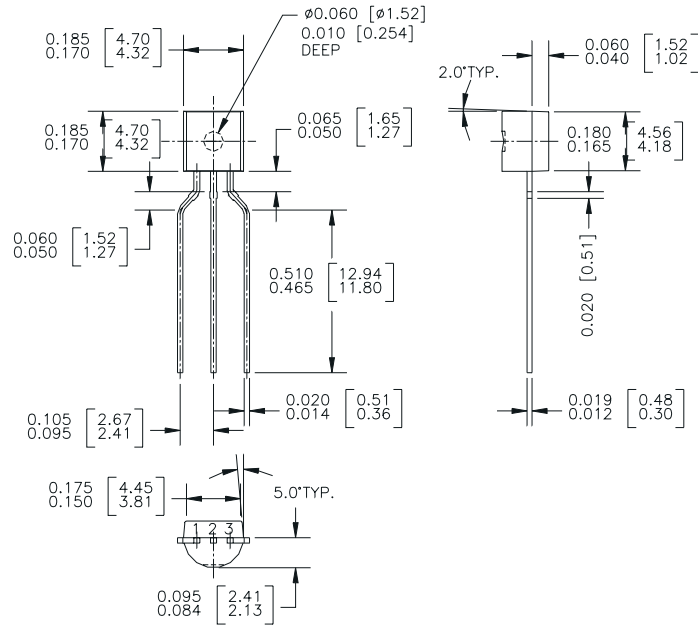


Figure 5. Collector Output Capacitance

Package Dimensions

BC635/637/639

TO-92



Dimensions in Millimeters

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