

BC635/637/639

Switching and Amplifier Applications • Complement to BC636/638/640



1. Emitter 2. Collector 3. Base

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{CER}	Collector-Emitter Voltage at R _{BF} =1KΩ		
OLIK	: BC635	45	V
	: BC637	60	V
	: BC639	100	V
V _{CES}	Collector-Emitter Voltage		
020	: BC635	45	V
	: BC637	60	V
	: BC639	100	V
V _{CEO}	Collector-Emitter Voltage		
020	: BC635	45	V
	: BC637	60	V
	: BC639	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current	1	А
I _{CP}	Peak Collector Current	1.5	А
	Base Current	100	mA
I _B P _C	Collector Power Dissipation	1	W
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-65 ~ 150	°C

PW=5ms, Duty Cycle=10%

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C =10mA, I _B =0				
	: BC635		45			V
	: BC637		60			V
	: BC639		80			V
I _{CBO}	Collector Cut-off Current	V_{CB} =30V, I_{E} =0			0.1	μΑ
I _{EBO}	Emitter Cut-off Current	V_{EB} =5V, I_C =0			0.1	μΑ
h _{FE1}	DC Current Gain : All	V _{CE} =2V, I _C =5mA	25			
h_{FE2}	: BC635	V _{CE} =2V, I _C =150mA	40		250	
	: BC637/BC639		40		160	
h_{FE3}	: All	V_{CE} =2V, I_{C} =500mA	25			
V _{CE} (sat)	Collector-Emitter Saturation Voltage	I _C =500mA, I _B =50mA			0.5	V
V _{BE} (on)	Base-Emitter On Voltage	V_{CE} =2V, I_{C} =500mA			1	V
f _T	Current Gain Bandwidth Product	V _{CE} =5V, I _C =10mA, f=50MHz		100		MHz

Typical Characteristics

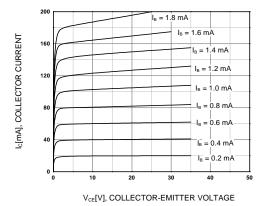


Figure 1. Static Characteristic

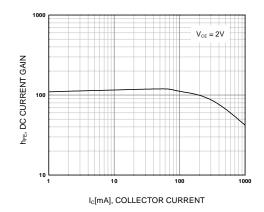


Figure 2. DC current Gain

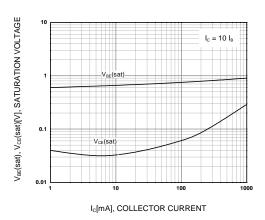


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

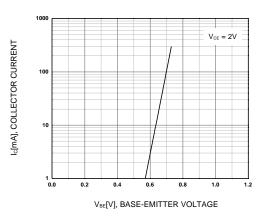


Figure 4. Base-Emitter On Voltage

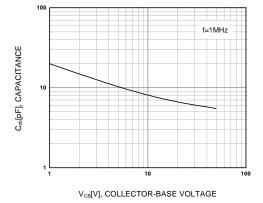
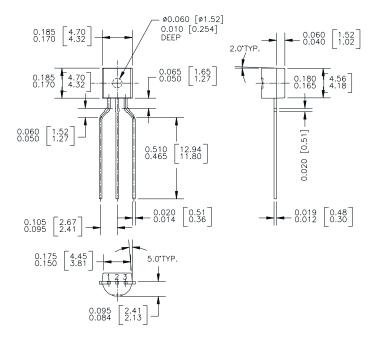


Figure 5. Collector Output Capacitance

Package Dimensions

TO-92



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Programmable Ad	ctive Droop™	OPTOPLANAR™	SMART START™	

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