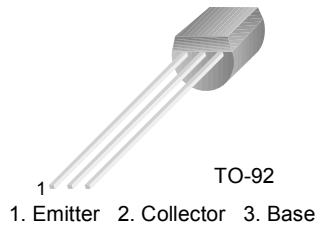


BC638

PNP Epitaxial Silicon Transistor

Switching and Amplifier Applications

- Complement to BC637



Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{CER}	Collector-Emitter Voltage at R _{BE} =1KΩ	-60	V
V _{CES}	Collector-Emitter Voltage	-60	V
V _{CEO}	Collector-Emitter Voltage	-60	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	°C
T _{STG}	Storage Temperature	-65 ~ 150	°C

Electrical Characteristics T_a = 25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C = -10mA, I _B =0	-60			V
I _{CBO}	Collector Cut-off Current	V _{CB} = -30V, I _E =0			-0.1	μA
I _{EBO}	Emitter Cut-off Current	V _{EB} = -5V, I _C =0			-0.1	μA
h _{FE1} h _{FE2} h _{FE3}	DC Current Gain	V _{CE} = -2V, I _C = -5mA V _{CE} = -2V, I _C = -150mA V _{CE} = -2V, I _C = -500mA	25 40 25		160	
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

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
BC638	BC638BU	TO-92	--	--	10,000
BC638	BC638TA	TO-92	--	--	2,000
BC638	BC638TF	TO-92	--	--	2,000
BC638	BC638TFR	TO-92	--	--	2,000

Typical Performance Characteristics

Figure 1. Static Characteristic

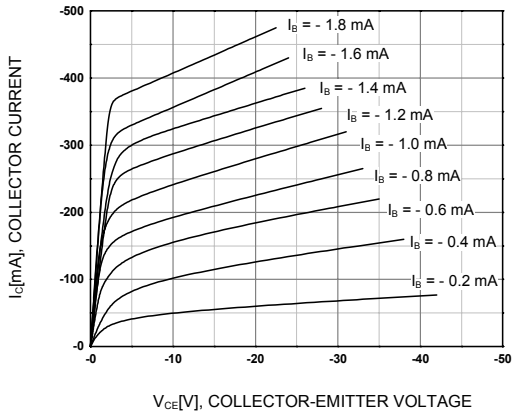
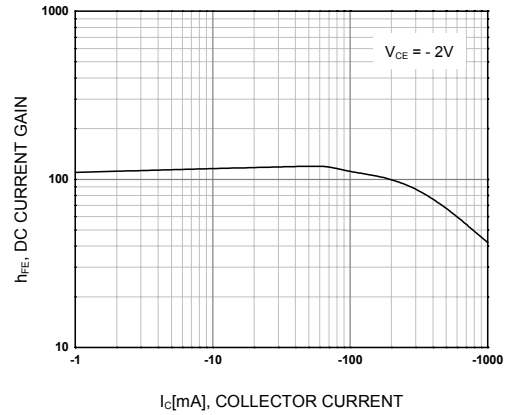


Figure 2. DC Current Gain



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

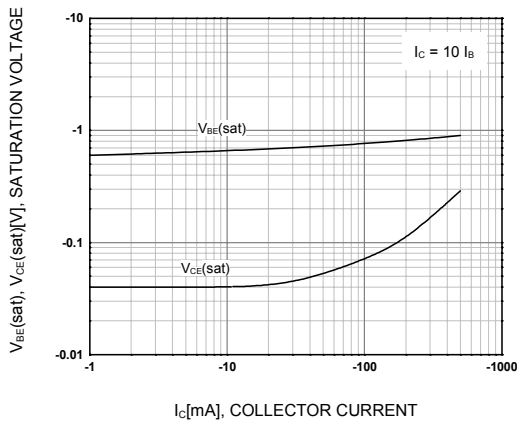


Figure 4. Base-Emitter On Voltage

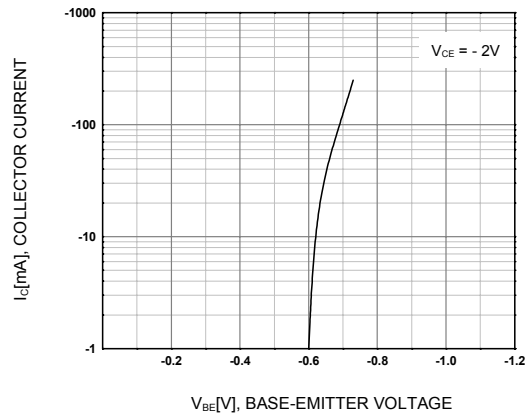
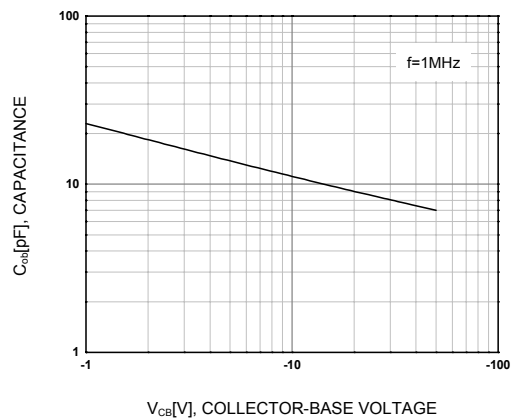
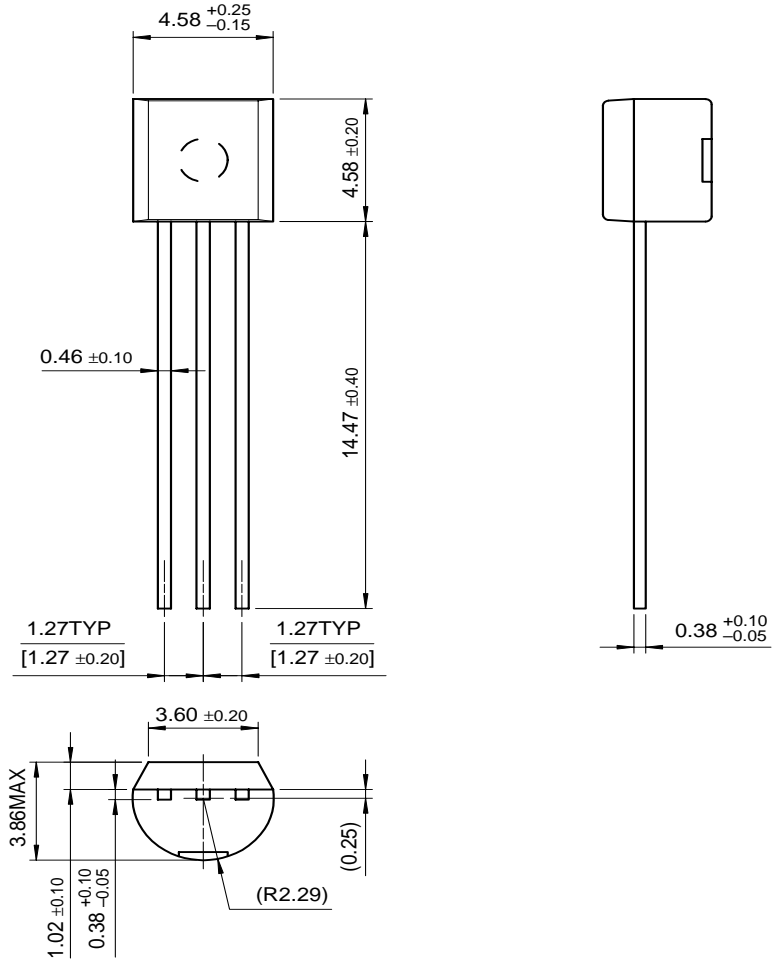


Figure 5. Collector Output Capacitance



Mechanical Dimensions

TO-92



Dimensions in Millimeters

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CROSSVOLT™	GTO™	MICROWIRE™	Quiet Series™	UHC™
DOME™	HiSeC™	MSX™	RapidConfigure™	UltraFET®
EcoSPARK™	I ² C™	MSXPro™	RapidConnect™	UniFET™
E ² C MOS™	i-Lo™	OCX™	μSerDes™	VCX™
EnSigna™	ImpliedDisconnect™	OCXPro™	SILENT SWITCHER®	Wire™
FACT™	IntelliMAX™	OPTOLOGIC®	SMART START™	
FACT Quiet Series™		OPTOPLANAR™	SPM™	
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The Power Franchise®		POP™	SuperFET™	
Programmable Active Droop™		Power247™	SuperSOT™-3	
		PowerEdge™	SuperSOT™-6	

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