



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92 Plastic-Encapsulate Transistors

BC636,BC638,BC640 TRANSISTOR (PNP)

FEATURES

High current transistors

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage BC636	-45	V
	BC638	-60	
	BC640	-100	
V_{CEO}	Collector-Emitter Voltage BC636	-45	V
	BC638	-60	
	BC640	-80	
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-1	A
P_C	Collector Power Dissipation	0.83	W
$R_{\theta JA}$	Thermal Resistance, junction to Ambient	150	$^{\circ}\text{C}/\text{W}$
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

TO-92

1. EMITTER
2. COLLECTOR
3. BASE



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$ BC636	-45			V
		BC638	-60			
		BC640	-100			
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$ BC636	-45			V
		BC638	-60			
		BC640	-80			
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-30\text{V}, I_E=0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}, I_C=0$			-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=-2\text{V}, I_C=-5\text{mA}$	40			
	$h_{FE(2)}$	$V_{CE}=-2\text{V}, I_C=-150\text{mA}$	63		250	
	$h_{FE(3)}$	$V_{CE}=-2\text{V}, I_C=-500\text{mA}$	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-0.5	V
Base-emitter voltage	V_{BE}	$V_{CE}=-2\text{V}, I_C=-500\text{mA}$			-1	V
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_C=-50\text{mA}, f=100\text{MHz}$	100			MHz

CLASSIFICATION OF $h_{FE(2)}$

Rank	BC636-10	BC636-16, BC638-16, BC640-16
Range	63-160	100-250

Typical Characteristics

BC636,BC638,BC640

