

Plastic-Encapsulate Transistors

TRANSISTOR (PNP)

FEATURES

- NPN Complements to BCX54U,BCX55U,BCX56U
- Low Voltage
- High Current

APPLICATIONS

- Medium Power General Purposes
- Driver Stages of Audio Amplifiers

MARKING:

BCX51U:AA, BCX51-10U:AC, BCX51-16U:AD

BCX52U:AE, BCX52-10U:AG, BCX52-16U:AM

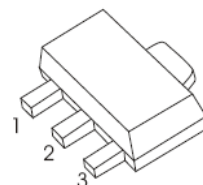
BCX53U:AH, BCX53-10U:AK, BCX53-16U:AL

SOT-89-3L

1. BASE

2. COLLECTOR

3. EMITTER



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

Symbol	Parameter		Value	Unit
V_{CBO}	Collector-Base Voltage	BCX51U	-45	V
		BCX52U	-60	
		BCX53U	-100	
V_{CEO}	Collector-Emitter Voltage	BCX51U	-45	V
		BCX52U	-60	
		BCX53U	-80	
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current		-1	A
P_C	Collector Power Dissipation		500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient		250	$^{\circ}\text{C}/\text{W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range		-55~+150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$	BCX51U	-45		V
			BCX52U	-60		
			BCX53U	-100		
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C=-10\text{mA}, I_B=0$	BCX51U	-45		V
			BCX52U	-60		
			BCX53U	-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	$h_{FE(1)}^*$	$V_{CE}=-2\text{V}, I_C=-5\text{mA}$	63			
	$h_{FE(2)}^*$	$V_{CE}=-2\text{V}, I_C=-150\text{mA}$	63		250	
	$h_{FE(3)}^*$	$V_{CE}=-2\text{V}, I_C=-0.5\text{A}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=-0.5\text{A}, I_B=-50\text{mA}$			-0.5	V
Base-emitter voltage	V_{BE}^*	$V_{CE}=-2\text{V}, I_C=-0.5\text{A}$			-1	V
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$		50		MHz

* Pulse Test

CLASSIFICATION OF $h_{FE(2)}$

RANK	BCX51U BCX52U BCX53U	BCX51-10U BCX52-10U BCX53-10U	BCX51-16U BCX52-16U BCX53-16U
RANGE	63–250	63–160	100–250

Typical Characteristics

