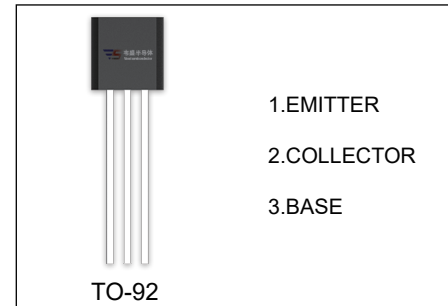


BC307/308/309 TRANSISTOR (PNP)

FEATURES

- Amplifier dissipation NPN Silicon



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
BC307	TO-92	Bulk	1000pcs/Bag
BC307-TA	TO-92	Tape	2000pcs/Box
BC308	TO-92	Bulk	1000pcs/Bag
BC308-TA	TO-92	Tape	2000pcs/Box
BC309	TO-92	Bulk	1000pcs/Bag
BC309-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CEO}	Collector-Emitter Voltage	BC307	-45
		BC308/309	-25
V_{EBO}	Emitter-Base Voltage	BC307	-6
		BC308/309	-5
I_C	Collector Current -Continuous	-0.1	A
P_C	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C /W
$R_{\theta JC}$	Thermal Resistance, Junction to Case	125	°C /W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55-150	°C

$T_a=25\text{ }^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$ BC307 BC308/309	-50 -30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-2\text{mA}, I_B=0$ BC307 BC308/309	-45 -25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-45\text{V}, I_E=0$ $V_{CB}=-25\text{V}, I_E=0$ BC307 BC308/309			-15	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}, I_C=0$			-15	nA
DC current gain	h_{FE}	$V_{CE}=-5\text{V}, I_C=-2\text{mA}$	120		800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$			-0.3	V
		$I_C=-100\text{mA}, I_B=-5\text{mA}$			-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$			-0.75	V
		$I_C=-100\text{mA}, I_B=-5\text{mA}$			-1	V
Base-emitter voltage	V_{BE}	$V_{CE}=-5\text{V}, I_C=-2\text{mA}$	-0.55		-0.75	V
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_C=-10\text{mA}, f=50\text{MHz}$		130		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$			6	pF
Noise figure	NF	$V_{CE}=-5\text{V}, I_C=-0.2\text{mA},$ $f=1\text{KHz}, R_G=2\text{K}\Omega$ BC307/BC308 BC309			10 4	dB
		$V_{CE}=-5\text{V}, I_C=-0.2\text{mA},$ $f=30-15\text{KHz}, R_G=2\text{K}\Omega$ BC309			4	

CLASSIFICATION OF h_{FE}

Rank	A	B	C
Range	120-220	180-460	380-800