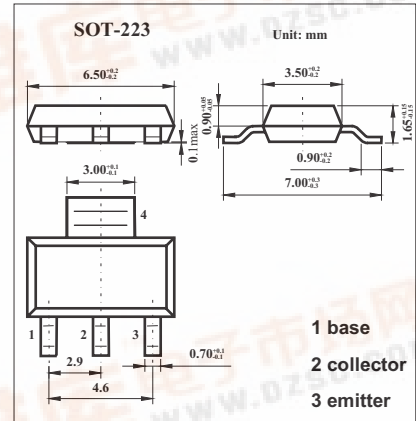


SMD Type Transistors

NPN Medium Power Transistor
BCP54; BCP55; BCP56

■ Features

- High collector current
- 1.3 W power dissipation.



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
collector-base voltage	BCP54	45	V
	BCP55	60	V
	BCP56	100	V
collector-emitter voltage	BCP54	45	V
	BCP55	60	V
	BCP56	80	V
emitter-base voltage	VEBO	5	V
collector current (DC)	Ic	1	A
peak collector current	ICM	1.5	A
peak base current	IBM	0.2	A
total power dissipation	Ptot	1.33	W
storage temperature	Tstg	-65 to +150	°C
junction temperature	Tj	150	°C
operating ambient temperature	Tamb	-65 to +150	°C
thermal resistance from junction to ambient	Rth j-a	94	K/W
thermal resistance from junction to soldering point	Rth j-s	13	K/W

BCP54; BCP55; BCP56■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
collector cut-off current	I_{CBO}	$I_E = 0\text{ A}; V_{CB} = 30\text{ V}$			100	nA
		$I_E = 0\text{ A}; V_{CB} = 30\text{ V}; T_j = 150^\circ\text{C}$			10	μA
emitter cut-off current	I_{EBO}	$I_C = 0\text{ A}; V_{EB} = 5\text{ V}$			100	nA
DC current gain	h_{FE}	$I_C = 5\text{ mA}; V_{CE} = 2\text{ V}$	63			
		$I_C = 150\text{ mA}; V_{CE} = 2\text{ V}$	63		250	
		$I_C = 500\text{ mA}; V_{CE} = 2\text{ V}$	40			
DC current gain BCP54-10; BCP55-10; BCP56-10 BCP54-16; BCP55-16; BCP56-16	h_{FE}	$V_{CE} = 2\text{ V}; I_C = 150\text{ mA}$	63		160	
			100		250	
collector-emitter saturation voltage	V_{CEsat}	$I_C = 0.5\text{ A}; I_B = 50\text{ mA}$			500	mV
base-emitter voltage	V_{BE}	$I_C = 0.5\text{ A}; V_{CE} = 2\text{ V}$			1	V
transition frequency	f_T	$I_C = 10\text{ mA}; V_{CE} = 5\text{ V}; f = 100\text{ MHz}$		130		MHz
DC current gain ratio of the complementary pairs	$\frac{h_{FE1}}{h_{FE2}}$	$ I_C = 150\text{ mA}; V_{CE} = 2\text{ V}$			1.6	