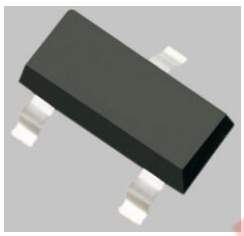
BC807/BC808-16/-25/-40

PNP Transistor

Features

- For switching, AF driver and amplifier applications
- These transistors are subdivided into three groups -16, -25 and -40, according to their current gain. As complementary types the NPN transistors BC817 and BC818 are recommended

SOT-23



1 Base 2. Emitter 3. Collector

Absolute Maximum Ratings (TA=25℃, unless otherwise noted)

Parameter		Symbol	Value	Unit
Collector Base Voltage	BC807 BC808	V_{CBO}	-50 -30	V
Collector Emitter Voltage	BC807 BC808	V_{CEO}	-45 -25	V
Emitter Base Voltage		V_{EBO}	-5	V
Collector Current		I_C	-0.5	A
Power Dissipation		P_C	0.3	W
Operation Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	℃

Electrical Characteristics (T_A=25 °C, unless otherwise noted)

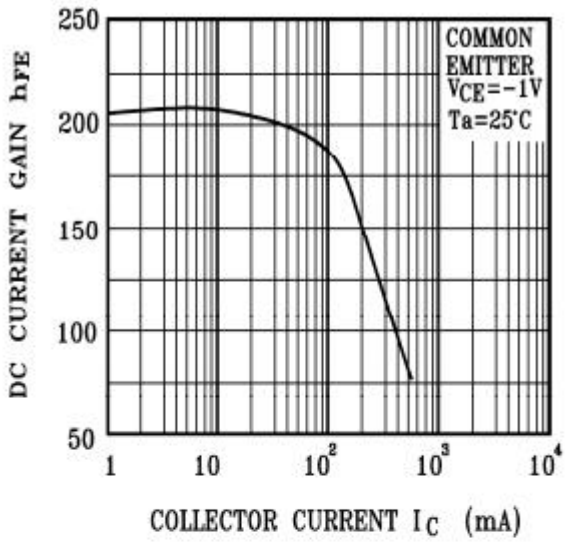
Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector cut-off current		I_{CBO}	V_{CB} =-20V			-100	nA
Emitter cut-off current		I_{EBO}	V_{EB} =-5V			-100	nA
DC current gain	BC807/BC808-16	h_{FE1}	V_{CE} =-1V, I_C =-100mA	100		250	
	BC807/BC808-25	h_{FE2}		160		400	
	BC807/BC808-40	h_{FE3}		250		600	
		h_{FE4}	V_{CE} =-1V, I_C =-500mA	40			
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C =-500mA, I_B =-50mA			-0.7	V
Base-emitter saturation voltage		$V_{BE(on)}$	I_C =-500mA, V_{CE} =-1V			-1.2	V
Transition frequency		f_T	V_{CE}=-5V, I_C=-10mA, f=50MHz	80			MHZ
Collector Base Capacitance		Ccbo	V_{CB}=-10V, f=1MHz		9		pF

Marking

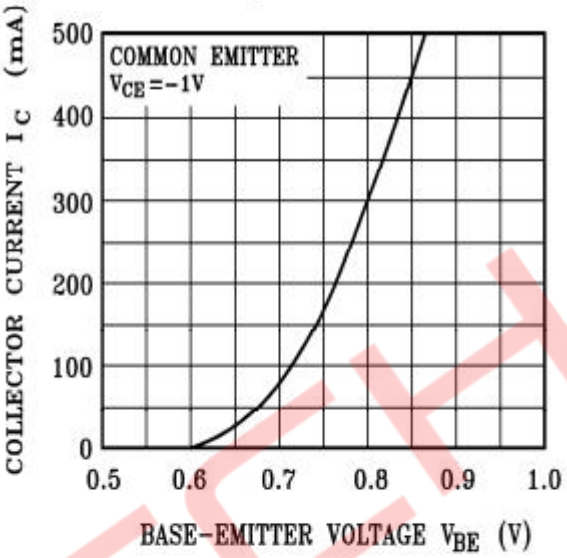
RANK	BC807-16	BC807-25	BC807-40
Marking	5CR	5CS	5CT
RANK	**BC808-16**	**BC808-25**	**BC808-40**
Marking	5CW	5CX	5CY

Typical Characteristics Curves

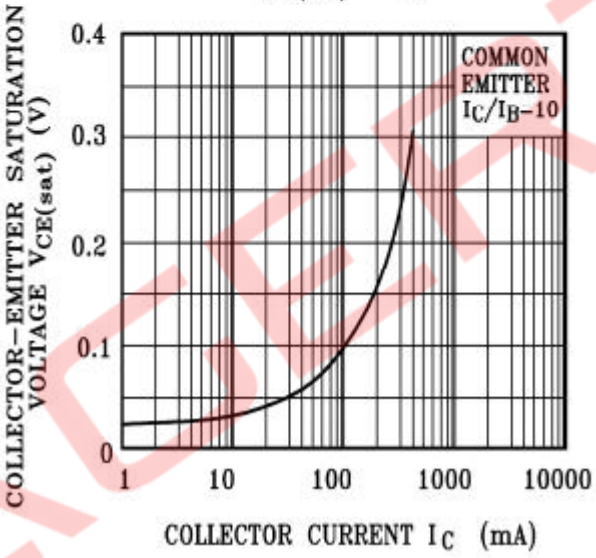
h_{FE} - I_C

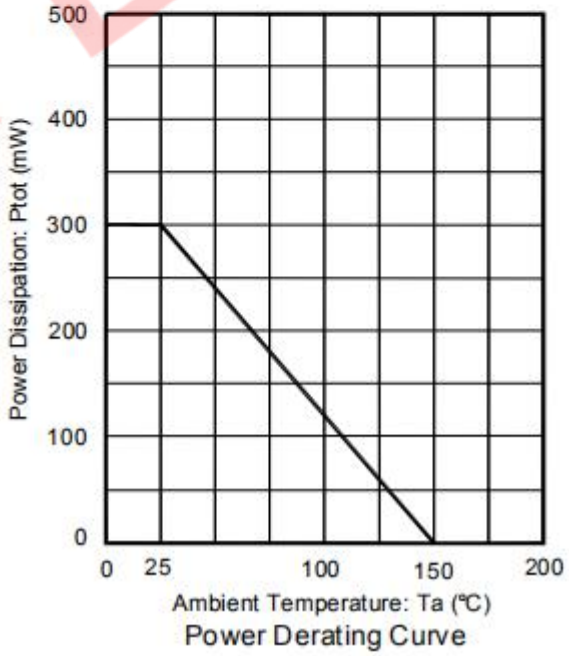


I_C - V_{BE}

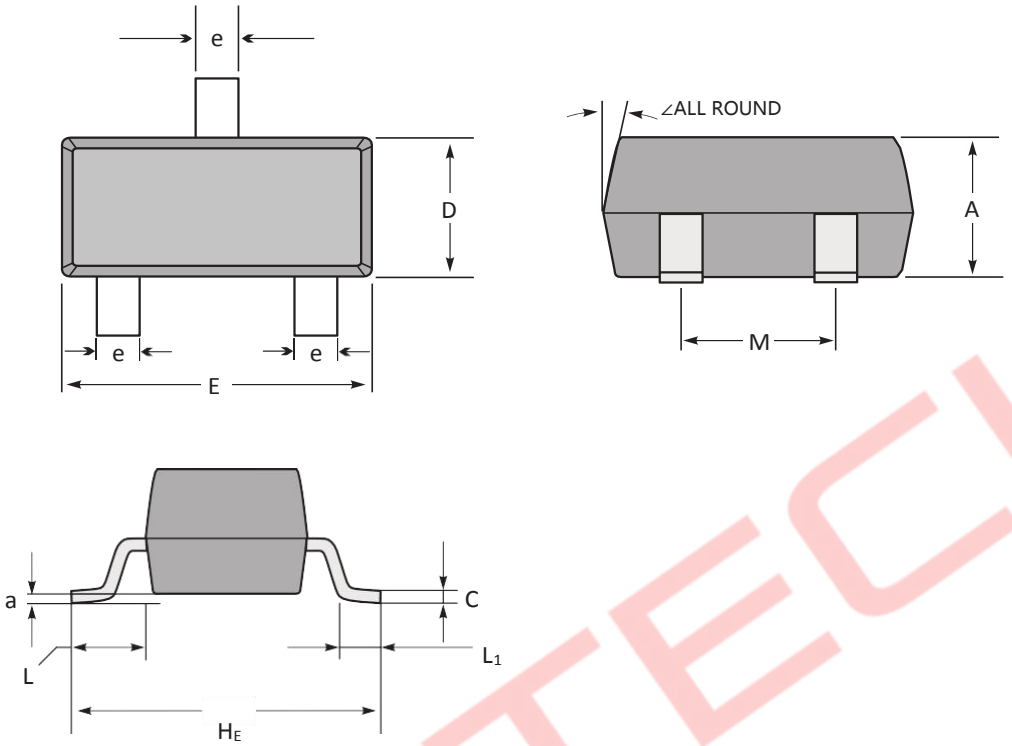


$V_{CE(sat)}$ - I_C





Package Outline



SOT-23 mechanical data

UNIT		A	C	D	E	H_E	e	M	L	L_1	a	∠
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.15	12°
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.0	
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	6	
	min	35	3	47	110	87	12	67			0.0	

The recommended mounting pad size