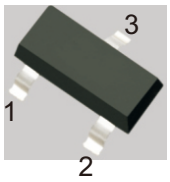
PNP TRANSISTOR

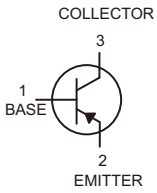
FEATURES

- Ideally suited for automatic insertion
- For switching and AF amplifier applications

PINNING

PIN	DESCRIPTION
1	BASE
2	EMITTER
3	COLLECTOR





Simplified outline SOT-23 and symbol

CLASSIFICATION OF hFE

Rank	A	B	C
Range	125-250	220-475	420-800

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

Parameter		Symbol	Value	Unit
Collector–Base Voltage	BC856 BC857 BC858	V_{CBO}	-80 -50 -30	V
Collector–Emitter Voltage	BC856 BC857 BC858	V_{CEO}	-65 -45 -30	V
Emitter–Base Voltage		V_{EBO}	-5	V
Collector Current — Continuous		I_C	-0.1	A
Collector Power Dissipation		P_C	200	mW
Thermal Resistance From Junction To Ambient		$R_{\theta JA}$	625	°C/W
Junction Temperature		T_J	150	°C
Storage Temperature		T_{stg}	-65~+150	°C

ELECTRICAL CHARACTERISTICS(TA = 25°C unless otherwise noted.)

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC856 BC857 BC858	V_{CBO}	I_C =-10uA, I_E = 0	-80 -50 -30			V
Collector-emitter breakdown voltage	BC856 BC857 BC858	V_{CEO}	I_C =-10mA, I_B = 0	-65 -45 -30			V
Emitter-base breakdown voltage		V_{EBO}	I_E =-1uA, I_C = 0	-5			V
Collector cut-off current	BC856 BC857 BC858	I_{CBO}	V_{CB} =-70V, I_E = 0 V_{CB} =-45V, I_E = 0 V_{CB} =-25V, I_E = 0			-0.1	uA
Collector cut-off current	BC856 BC857 BC858	I_{CEO}	V_{CE} =-60V, I_B =0 V_{CE} =-40V, I_B =0 V_{CE} =-25V, I_B =0			-0.1	uA
Emitter cut-off current		I_{EBO}	V_{EB} =-5V, I_C = 0			-0.1	uA
DC current gain		h_{FE}	V_{CE} =-5V, I_C=-2mA	125		800	
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C =-100mA, I_B =-5mA			-0.5	V
Base-emitter saturation voltage		$V_{BE(sat)}$	I_C =-100mA, I_B =-5mA			-1.1	V
Transition frequency		f_T	V_{CE} =-5V, I_C =-10mA,f =100MHz	100			MHz
Collector capacitance		C_{ob}	V_{CB} =-10V, f =1MHz			4.5	pF

TYPICAL CHARACTERICS

Fig 1. Static characteristics

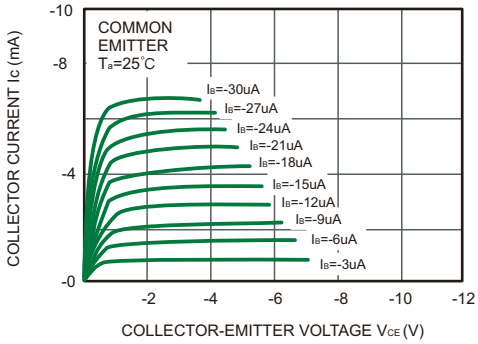


Fig 2. PC —— Ta

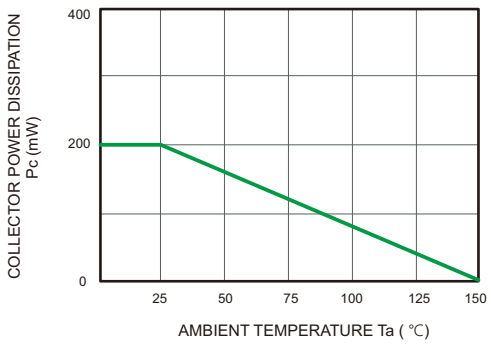


Fig 3. Cob / Cib —— VCB / VEB

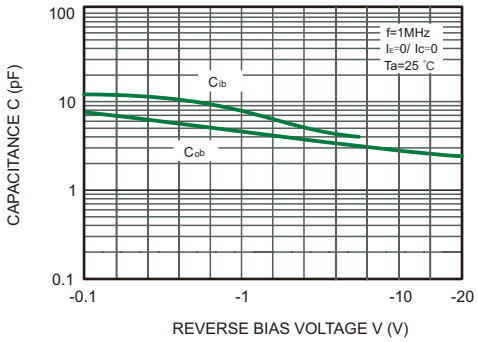


Fig 4. VCEsat —— IC

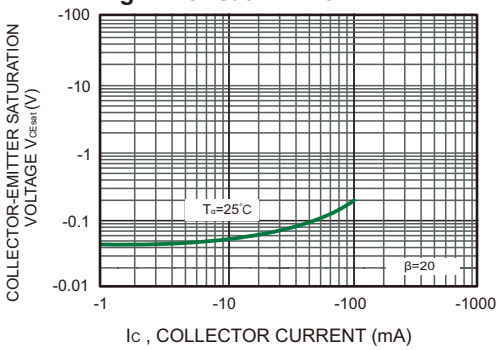


Fig 5. hFE —— IC

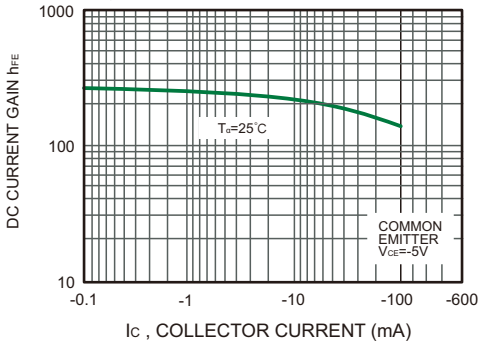


Fig 6. VBEsat —— IC

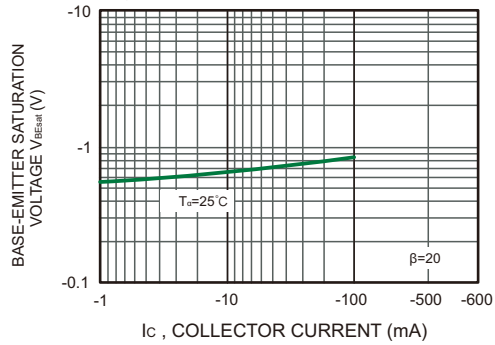


Fig 7. IC —— VBE

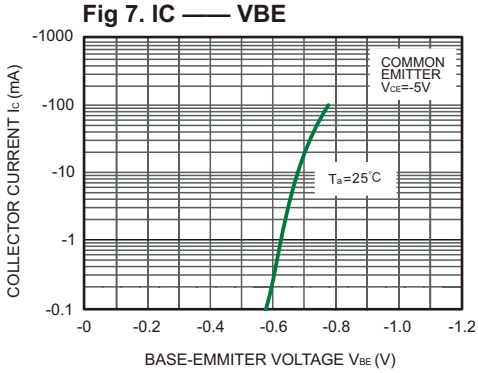
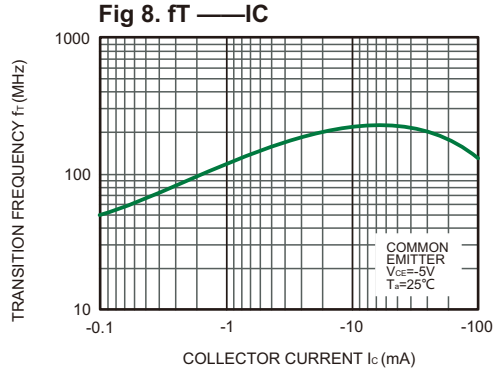
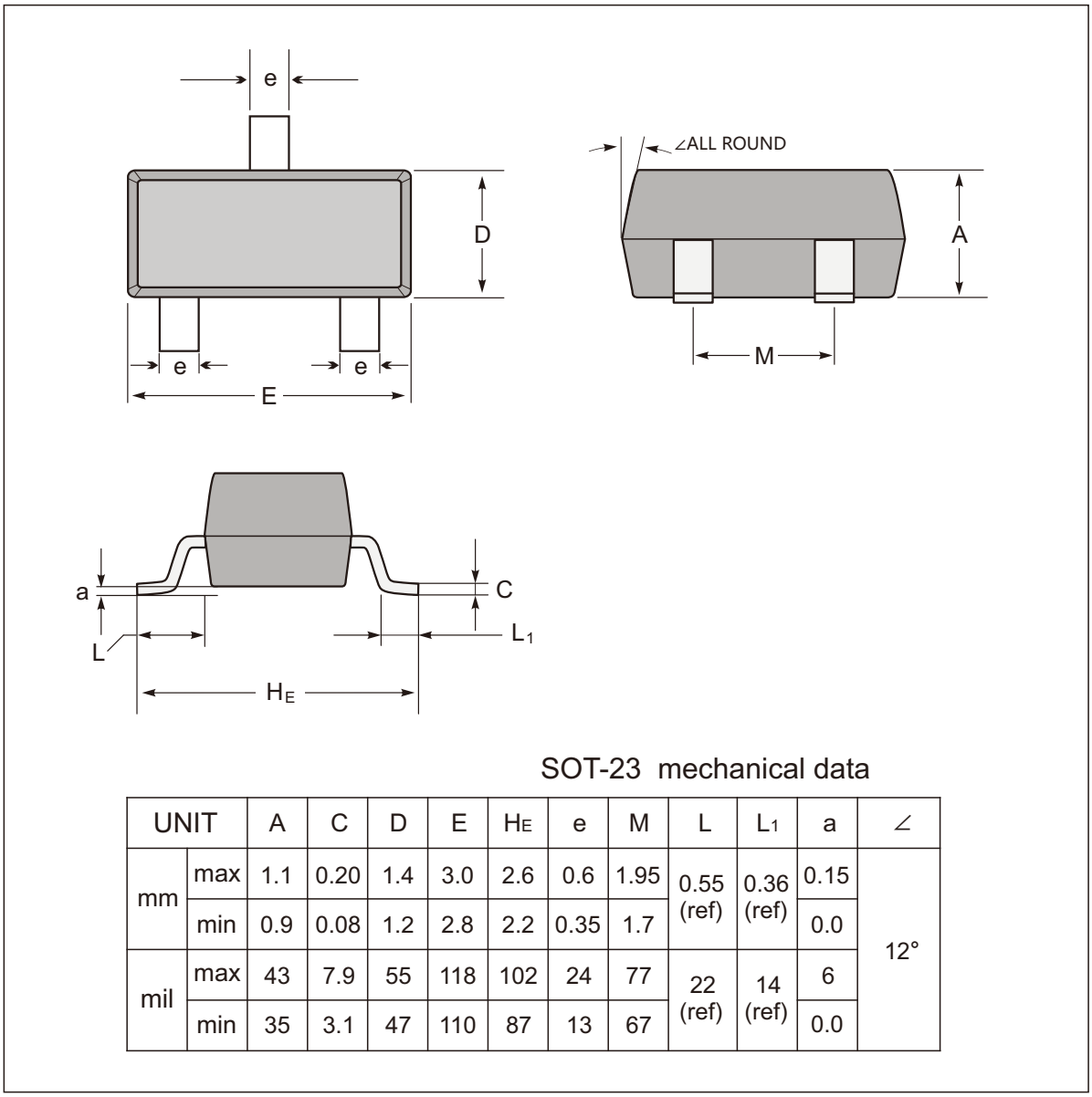


Fig 8. fT ——IC



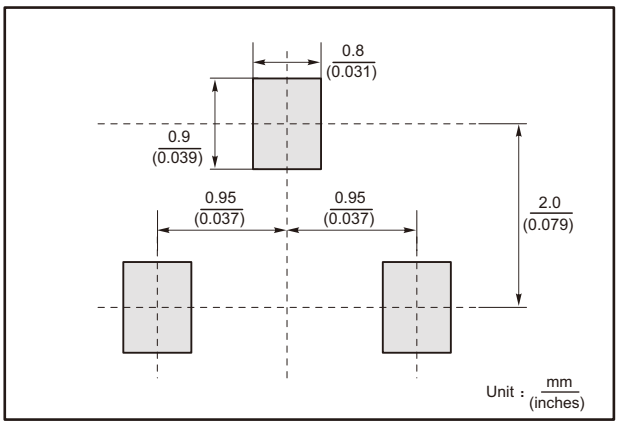
SOT-23 Package Outline Dimensions



SOT-23 mechanical data

UNIT		A	C	D	E	H_E	e	M	L	L_1	a	∠
mm	max	1.1	0.20	1.4	3.0	2.6	0.6	1.95	0.55 (ref)	0.36 (ref)	0.15	12°
	min	0.9	0.08	1.2	2.8	2.2	0.35	1.7			0.0	
mil	max	43	7.9	55	118	102	24	77	22 (ref)	14 (ref)	6	
	min	35	3.1	47	110	87	13	67			0.0	

The recommended mounting pad size



Marking

Type number	Marking code
BC856A	3A
BC856B	3B
BC857A	3E
BC857B	3F
BC857C	3G
BC858A	3J
BC858B	3K
BC858C	3L

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