

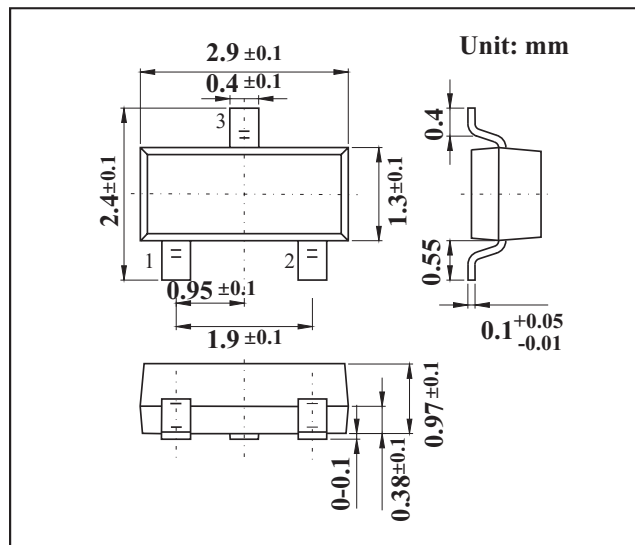
SOT-23 Plastic-Encapsulate Transistors

Features

- For general AF applications.
- High collector current.
- High current gain.
- Low collector-emitter saturation voltage.
- NPN Silicon AF Transistors

MECHANICAL DATA

- Case style:SOT-23molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	50	V
Collector-emitter voltage	V_{CE0}	45	V
Emitter-base voltage	V_{EB0}	5	V
Collector current (DC)	I_C	800	mA
power dissipation	P_D	310	mW
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-65 to +150	°C

PACKAGE INFORMATION

Device	Package	Shipping
BC817	SOT-23	3000/Tape&Reel

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-to-base breakdown voltage	V_{CB0}	$I_C = 10 \mu A, V_{BE} = 0$	50			V
Collector-to-emitter breakdown voltage	V_{CE0}	$I_C = 10 mA, I_B = 0$	45			V
Emitter-to-base breakdown voltage	V_{EB0}	$I_E = 10 \mu A, I_C = 0$	5			V
Collector cutoff current	I_{CES}	$V_{CB} = 25 V, V_{BE} = 0$			100	nA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4 V, I_C = 0$			100	nA
DC current gain *	h_{FE}	$I_C = 100 mA, V_{CE} = 1 V$	100		630	
		$I_C = 300 mA, V_{CE} = 1 V$	60			
Collector saturation voltage *	$V_{CE(sat)}$	$I_C = 500 mA, I_B = 50 mA$			0.7	V
Base emitter on voltage	$V_{BE(on)}$	$V_{CE} = 1V, I_C = 300mA$			1.2	V
Output Capacitance	C_{ob}	$V_{CB} = 10V, f = 1MHz$			12	pF
Transition frequency	f_T	$I_C = 10 mA, V_{CE} = 5 V, f = 50 MHz$		100		MHz

* Pulsed: $PW \leq 350 \mu s$, duty cycle $\leq 2\%$

Marking

NO.	BC817-16	BC817-25	BC817-40
Marking	8FA	8FB	8FC
hFE	100~250	160~400	250~630

RATINGS AND CHARACTERISTIC CURVES

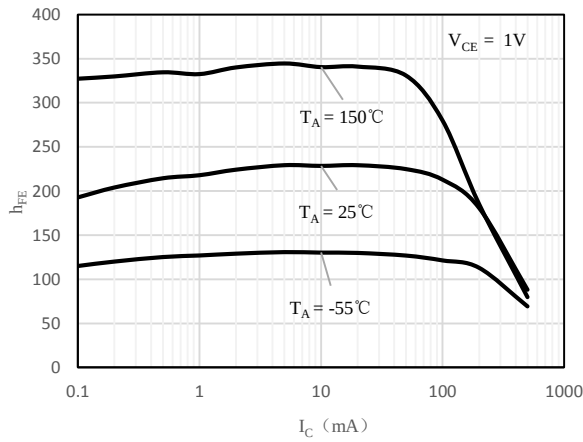


Fig 1 h_{FE} vs. I_C (BC817-16)

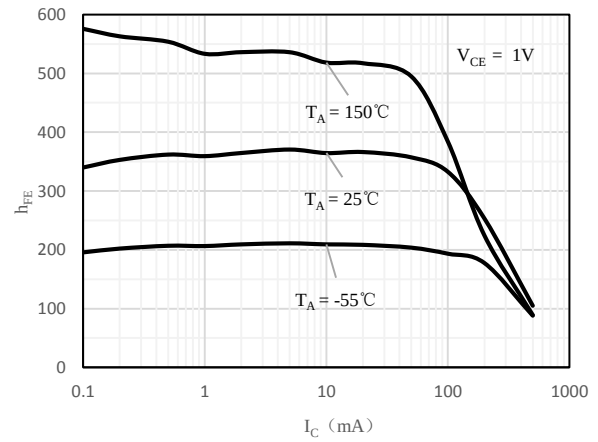


Fig 2 h_{FE} vs. I_C (BC817-25)

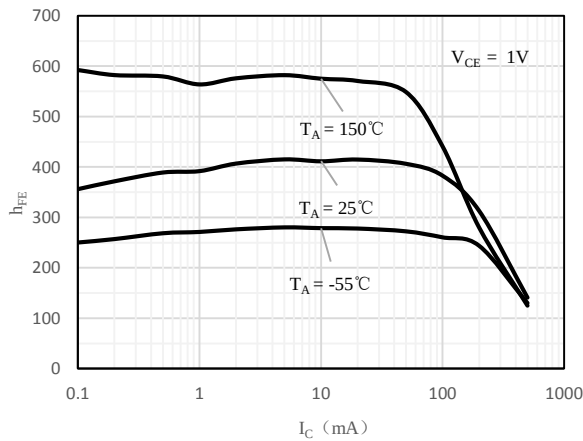


Fig 3 h_{FE} vs. I_C (BC817-40)

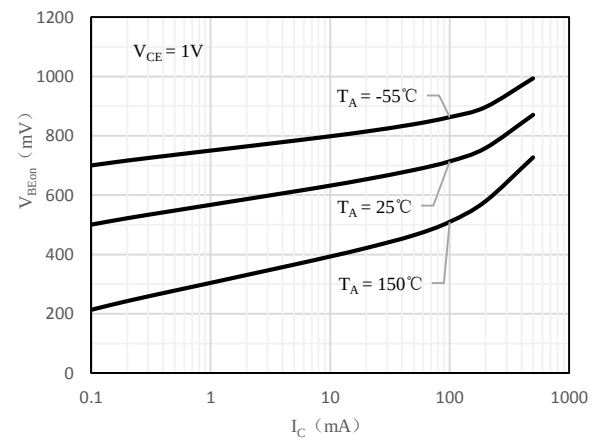


Fig 4 $V_{BE(ON)}$ vs. I_C

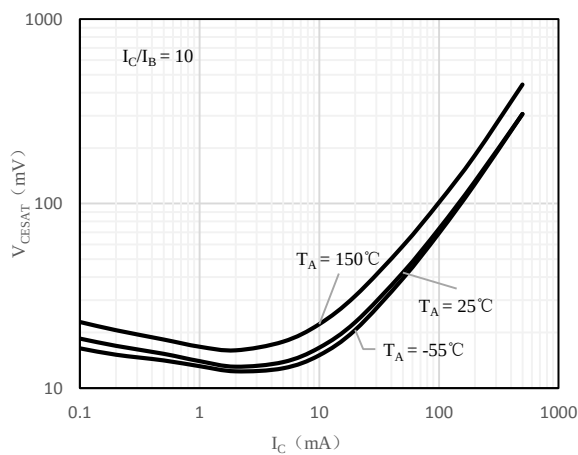


Fig 2 $V_{CE(sat)}$ vs. I_C

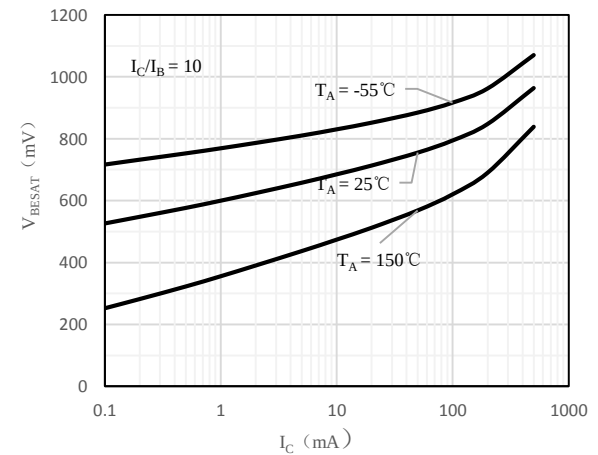


Fig 3 $V_{BE(sat)}$ vs. I_C