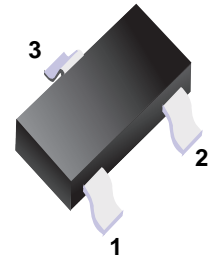


■ NPN Transistor

■ Features

- For General AF Applications
- High Collector Current
- High Current Gain
- Low Collector-Emitter Saturation Voltage



1. Base
2. Emitter
3. Collector

■ Simplified outline(SOT-323)

■ Absolute Maximum Ratings Ta = 25°C

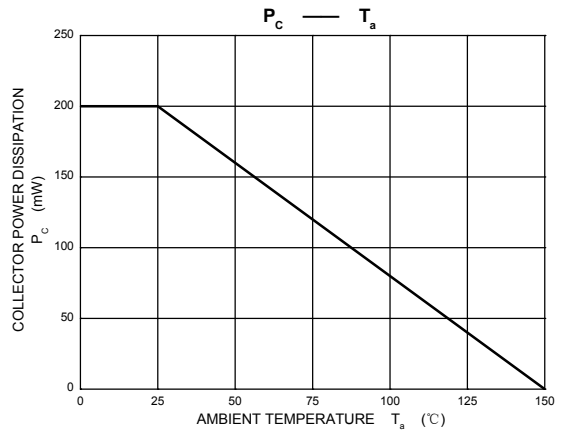
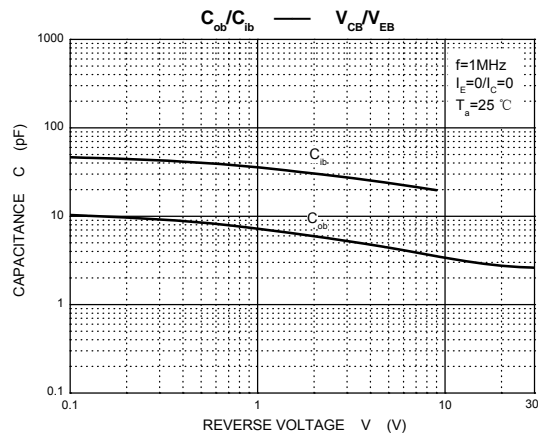
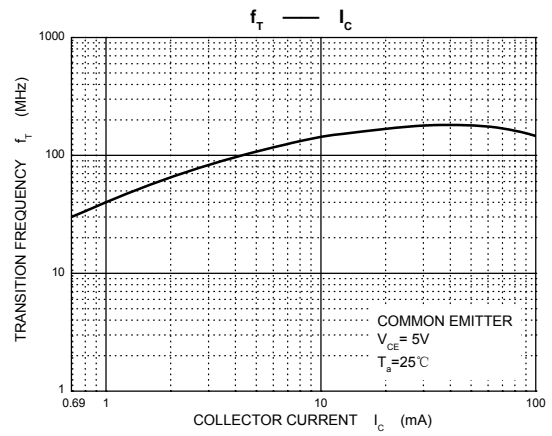
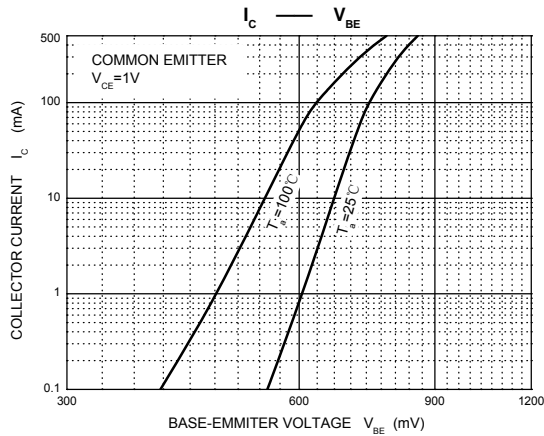
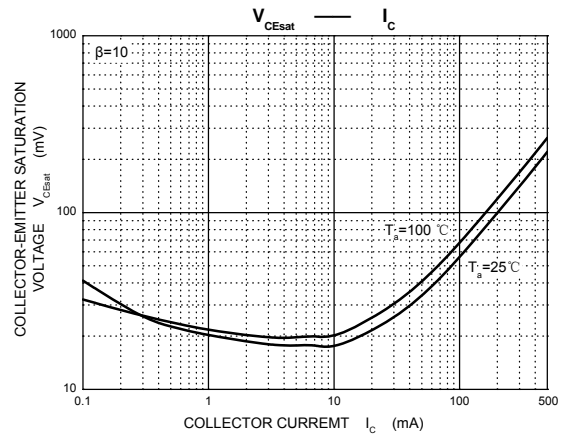
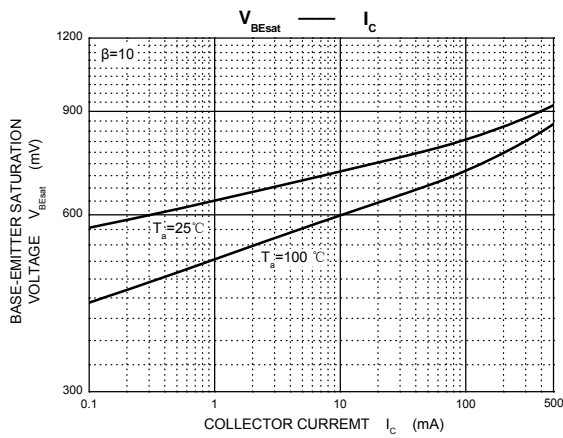
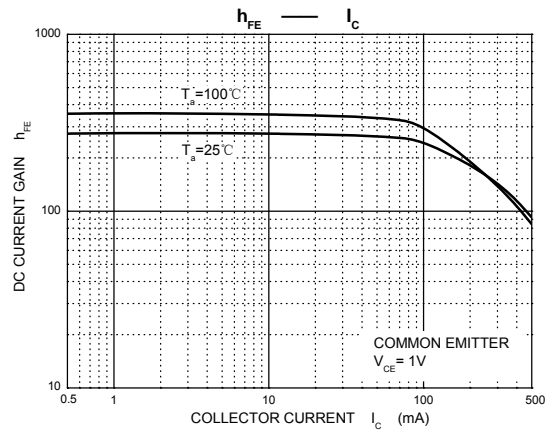
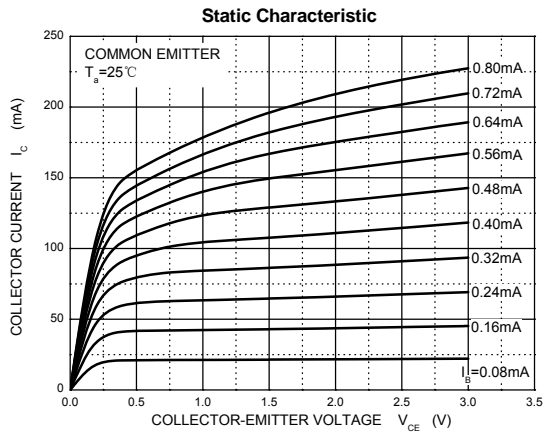
Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.5	A
P_C	Collector Dissipation	0.2	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	625	°C/W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C

■ Electrical Characteristics Ta = 25°C

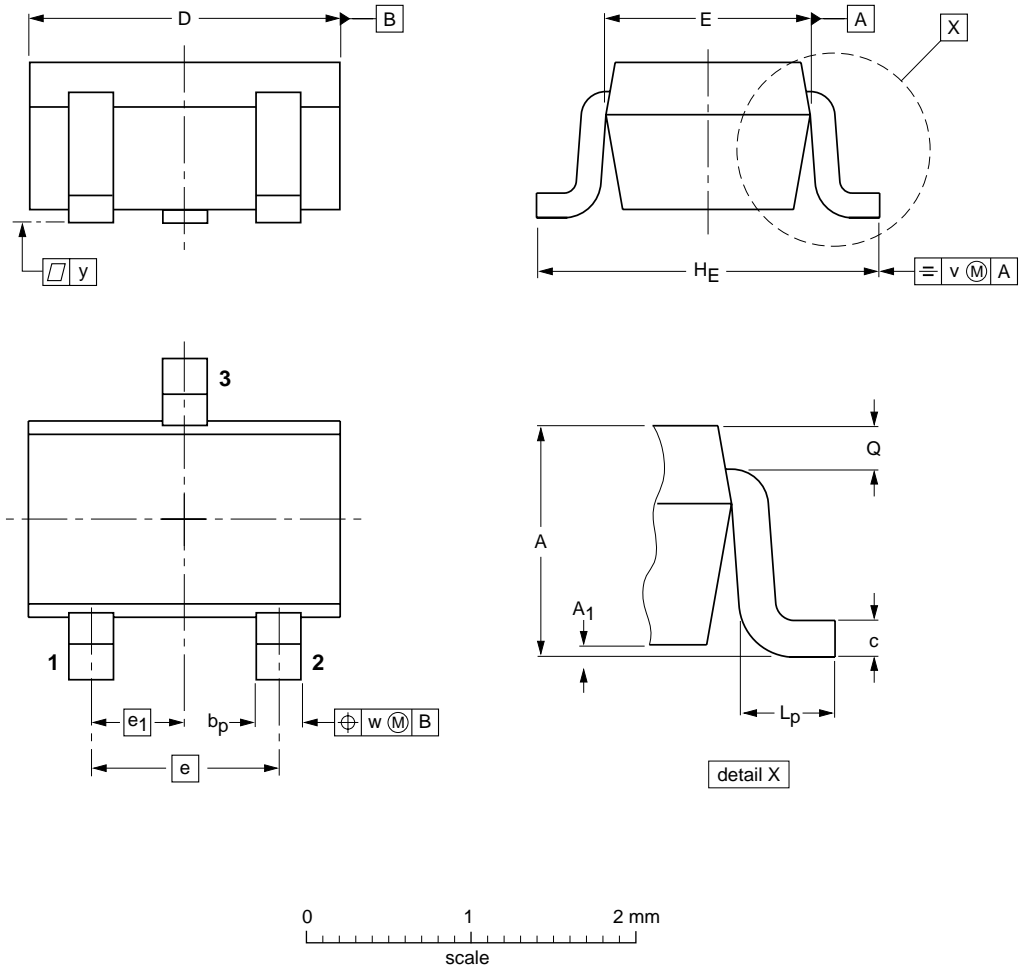
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20V, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=1V, I_C=100mA$	100		600	
	$h_{FE(2)}$	$V_{CE}=1V, I_C=500mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			1.2	V
Base-emitter voltage	$V_{BE(ON)}$	$V_{CE}=1V, I_C=500mA$			1.2	V
Transition frequency	f_T	$V_{CE}=5V, I_C=10mA, f=100MHz$	100			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$			5	pF

■ Classification of $h_{FE(1)}$

Rank	BC817-16W	BC817-25W	BC817-40W
Range	100-250	160-400	250-600
Marking	6A	6B	6C



■ SOT-323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

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