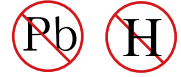




General Purpose Transistors

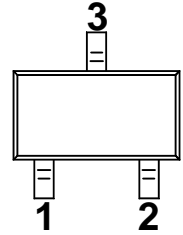
PNP Silicon



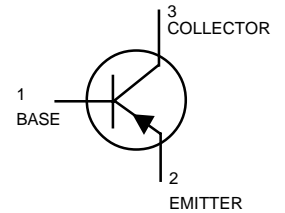
SOT-323

MAXIMUM RATINGS

Parameter	Symbol	Limits	Unit
Collector-Emitter Voltage	V _{CEO}	-45	V
Collector-Base Voltage	V _{CBO}	-50	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current(Continuous)	I _C	-500	mA

**THERMAL CHARACTERISTICS**

Parameter	Symbol	Limits	Unit
Total Device Dissipation FR-5 Board (Note 1) T _A = 25°C	PD	150	mW
Derate above 25°C		1.2	mW/°C
Thermal Resistance, Junction to Ambient	R _{θJA}	833	°C/W
Total Device Dissipation Alumina Substrate (Note 2) T _A = 25°C	PD	200	mW
Derate above 25°C		1.6	mW/°C
Thermal Resistance, Junction to Ambient	R _{θJA}	625	°C/W
Junction and Storage Temperature	T _J , T _{stg}	-55~+150	°C



1. FR-5 = 1.0 × 0.75 × 0.062 in.

2. Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.

DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
BC807W-16	5A	3000/Tape&Reel
BC807W-25	5B	
BC807W-40	5C / YL	

ELECTRICAL CHARACTERISTICS

BC807W-16 -25 -40

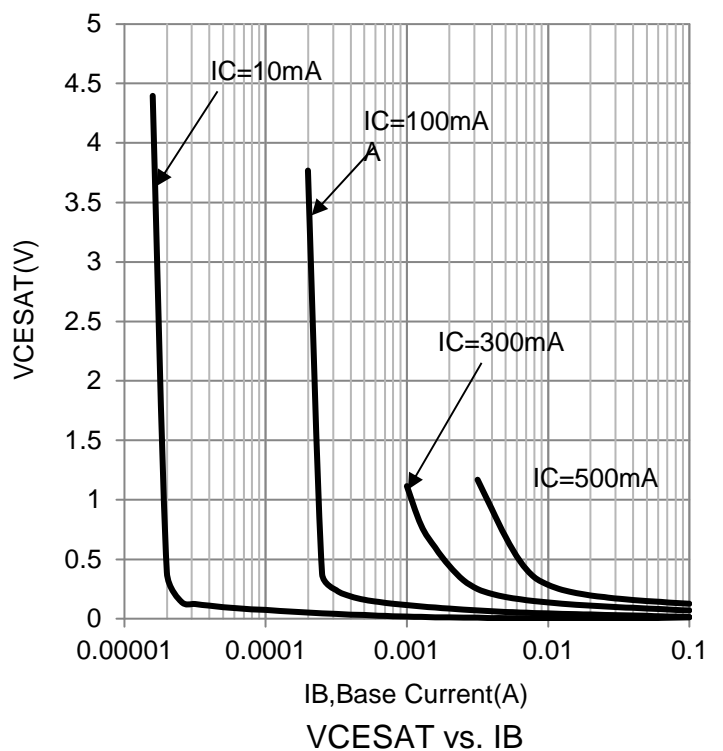
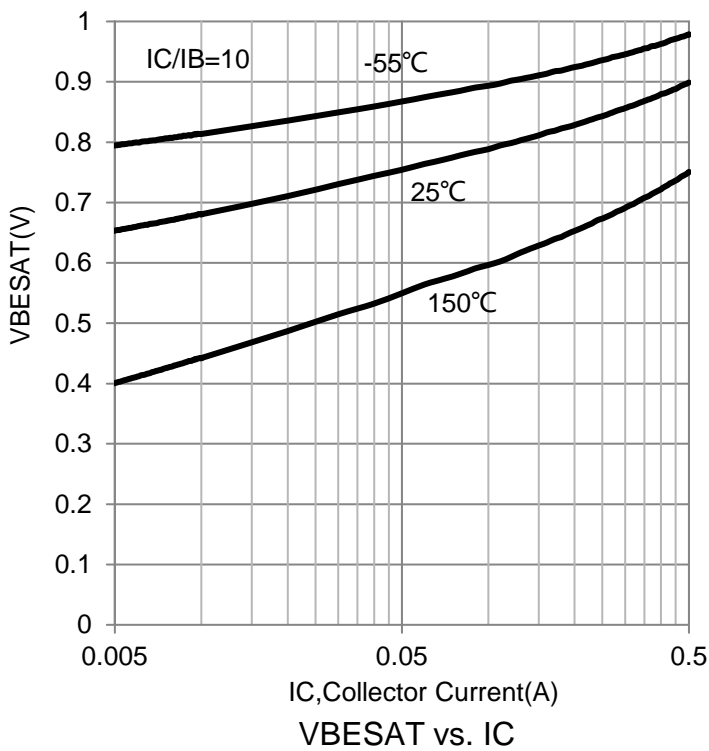
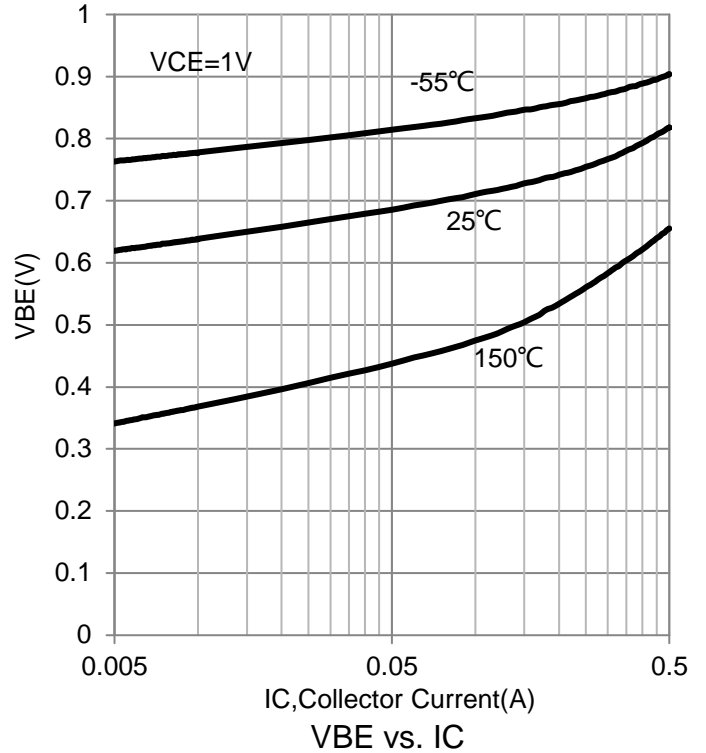
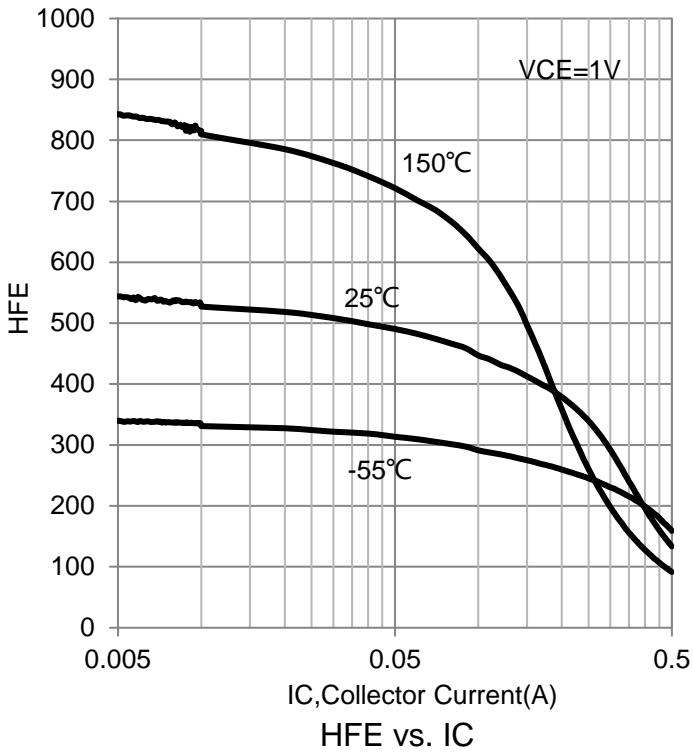
ELECTRICAL CHARACTERISTICS (Ta= 25 °C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS					
Collector–Emitter Breakdown Voltage (IC = -10 mA)	V(BR)CEO	-45	-	-	V
Collector–Emitter Breakdown Voltage (IC = -10 µA, VEB = 0)	V(BR)CES	-50	-	-	V
Emitter–Base Breakdown Voltage (IE = -1.0 µA)	V(BR)EBO	-5	-	-	V
Collector Cutoff Current (VCB = -20 V) (VCB = -20 V, TA= 150°C)	ICBO	-	-	-100 -5	nA µA
ON CHARACTERISTICS					
DC Current Gain (IC = -100 mA, VCE = -1.0 V) (IC = -500 mA, VCE = -1.0 V)	hFE	100 40	- -	600 -	
Collector–Emitter Saturation Voltage (IC = -500 mA, IB = -50 mA)	VCE(sat)	-	-	-0.7	V
Base–Emitter Voltage (IC = -500 mA, VCE = -1.0 V)	VBE(on)	-	-	-1.2	V
SMALL–SIGNAL CHARACTERISTICS					
Current–Gain — Bandwidth Product (IC = -10 mA, VCE = -5.0 V, f = 100 MHz)	fT	100	-	-	MHz
Output Capacitance (VCB = -10 V, f = 1.0 MHz)	Cobo	-	10	-	pF

Device	hFE
BC807W-16	100 - 250
BC807W-25	160 - 400
BC807W-40	250 - 600

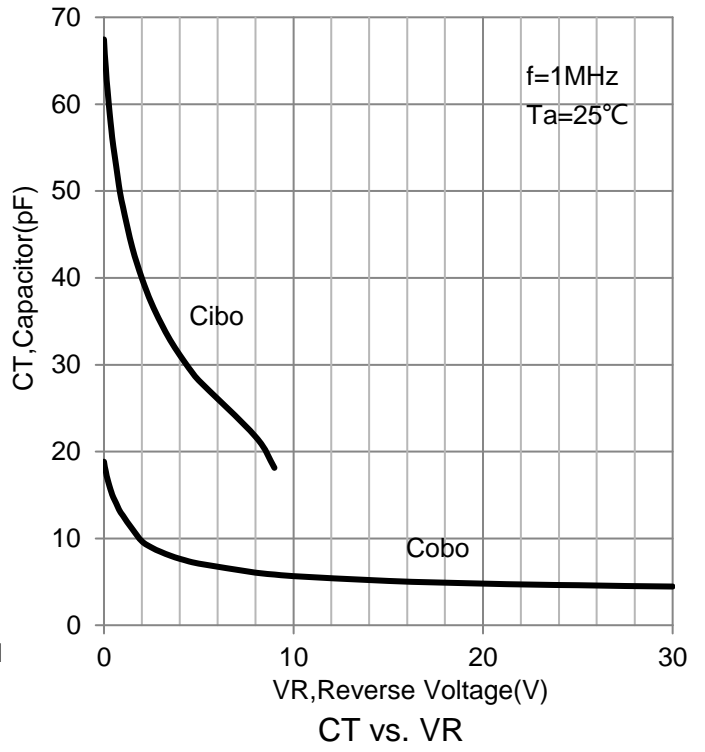
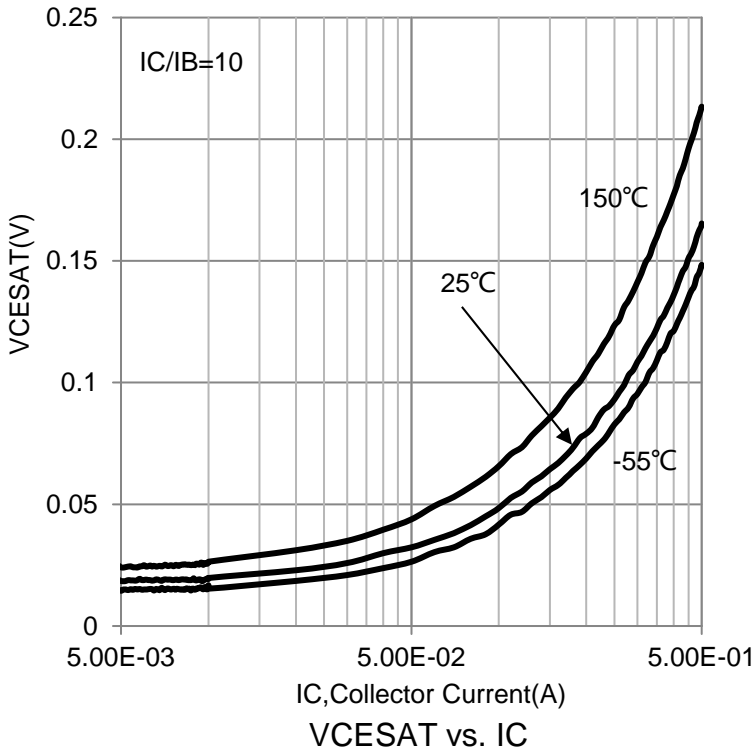
ELECTRICAL CHARACTERISTICS

BC807W-16 -25 -40



ELECTRICAL CHARACTERISTICS

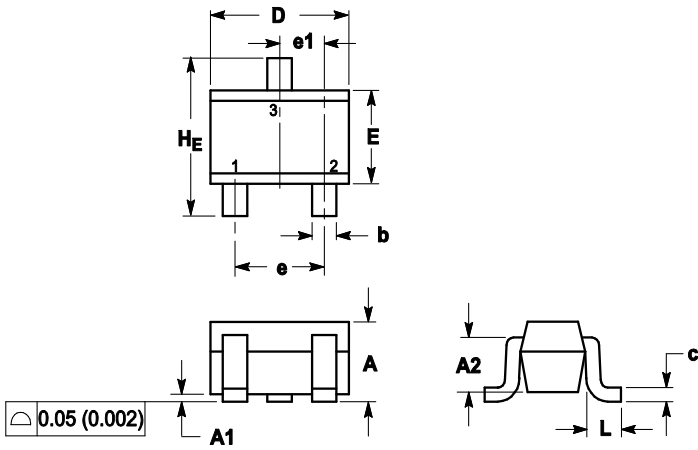
BC807W-16 -25 -40



PACKAGE OUTLINE & DIMENSIONS

BC807W-16 -25 -40

SOT-323 Package Outline Dimensions



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.05	0.10	0.000	0.002	0.004
A2	0.70REF			0.028REF		
b	0.30	0.35	0.40	0.012	0.014	0.016
c	0.10	0.18	0.25	0.004	0.007	0.010
D	1.80	2.10	2.20	0.071	0.083	0.087
E	1.15	1.24	1.35	0.045	0.049	0.053
e	1.20	1.30	1.40	0.047	0.051	0.055
e1	0.65REF			0.026REF		
L	0.20	0.38	0.56	0.008	0.015	0.022
HE	2.00	2.10	2.40	0.079	0.083	0.095

Soldering Footprint

