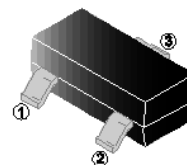


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

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

SOT-23



CLASSIFICATION OF h_{FE}

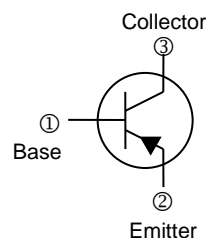
Part Number	Range	Marking
BC807-16-C	100~250	5A
BC807-25-C	160~400	5B
BC807-40-C	250~600	5C

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch

ORDER INFORMATION

Part Number	Type
BC807-16-C	Lead (Pb)-free and Halogen-free
BC807-25-C	
BC807-40-C	



ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted.)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-45	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-500	mA
Collector Power Dissipation	P_D	300	mW
Thermal Resistance, Junction-Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction, Storage Temperature Range	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (T=25°C unless otherwise noted)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	-50	-	-	V	$I_C = -10\mu A, I_E = 0$
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	-45	-	-	V	$I_C = -10mA, I_B = 0$
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	-5	-	-	V	$I_E = -1\mu A, I_C = 0$
Collector Cut-off Current		I_{CBO}	-	-	-0.1	μA	$V_{CB} = -45V, I_E = 0$
Emitter Cut-off Current		I_{EBO}	-	-	-0.1		$V_{EB} = -4V, I_C = 0$
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	-	-	-0.7	V	$I_C = -500mA, I_B = -50mA$
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	-	-	-1.2	V	$I_C = -500mA, I_B = -50mA$
DC Current Gain	BC807-16-C	h_{FE}	100	-	250		$V_{CE} = -1V, I_C = -100mA$
	BC807-25-C		160	-	400		
	BC807-40-C		250	-	600		
DC Current Gain		h_{FE}	40	-	-		$V_{CE} = -1V, I_C = -500mA$
Transition Frequency		f_T	-	100	-	MHz	$V_{CE} = -5V, I_C = -10mA, f = 100MHz$

CHARACTERISTIC CURVES

Fig. 1 - Static Characteristics

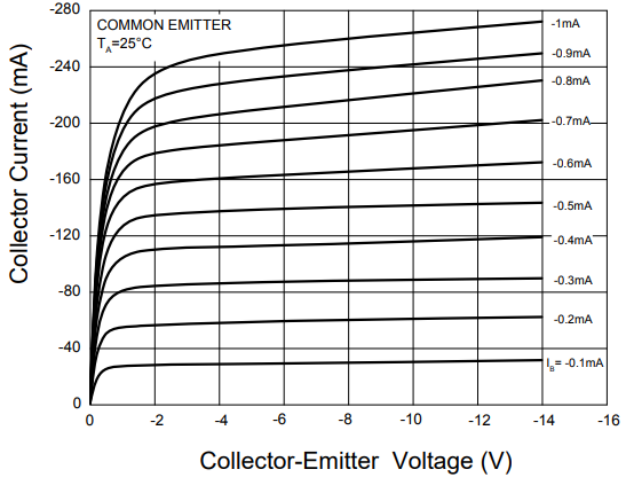


Fig. 2 - DC Current Gain Characteristics

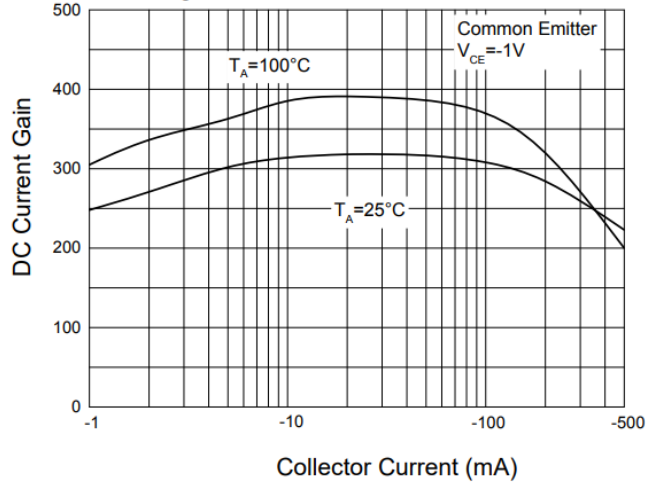


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

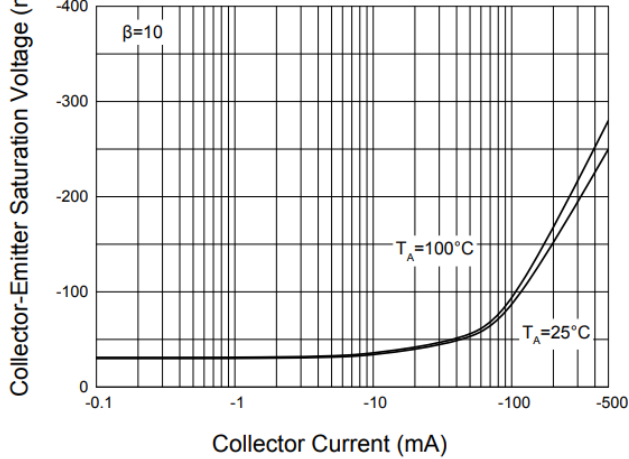


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

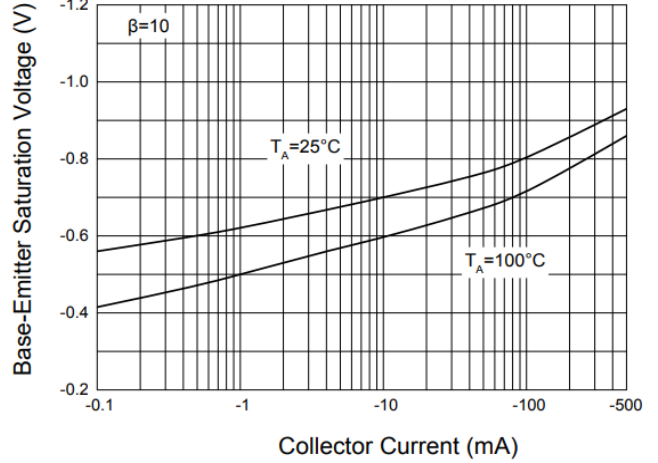


Fig. 5 - Base-Emitter Voltage Characteristics

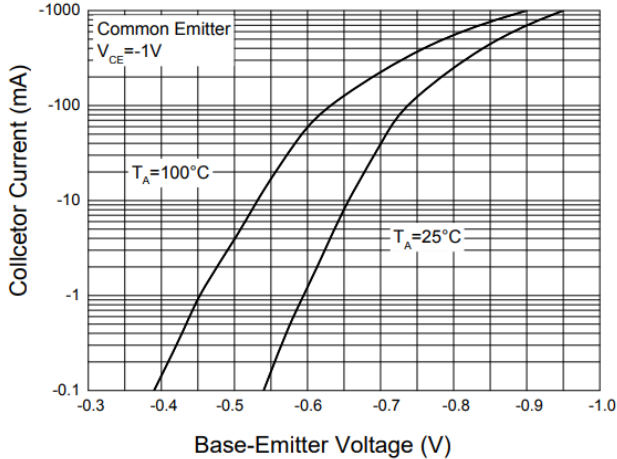
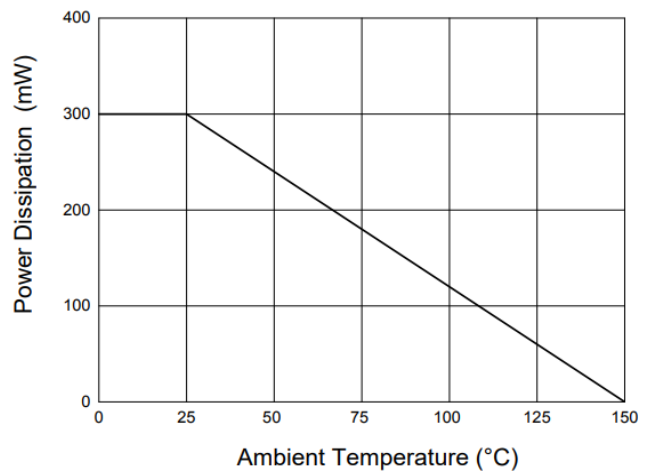
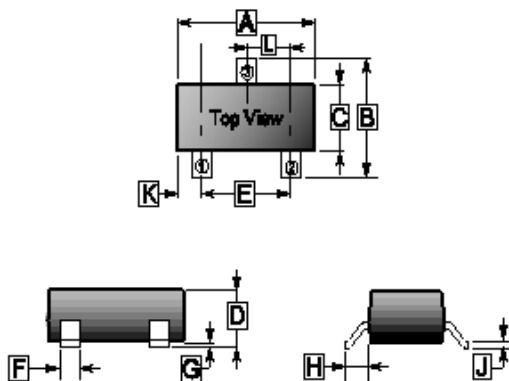


Fig. 6 - Power Derating Curve



PACKAGE OUTLINE DIMENSIONS

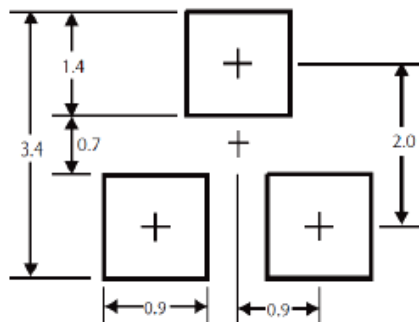
SOT-23



REF.	Millimeter	
	Min.	Max.
A	2.65	3.10
B	2.10	3.00
C	1.10	1.80
D	0.89	1.40
E	1.70	2.30
F	0.28	0.55
G	-	0.18
H	0.55 REF.	
J	0.05	0.26
K	0.60 REF.	
L	0.95 TYP.	

MOUNTING PAD LAYOUT

SOT-23



*Dimensions in millimeters