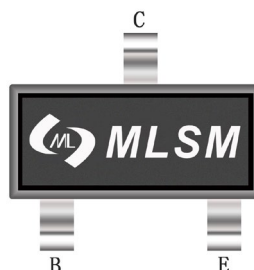
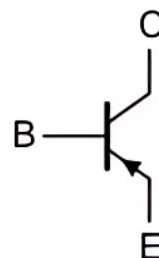


Features

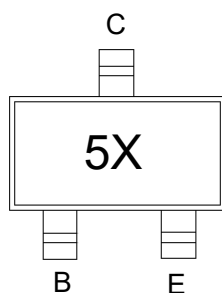
- Ideally suited for automatic insertion
- Epitaxial planar die construction
- Complementary NPN type available(BC817)



SOT-23 top view



Schematic diagram



Marking and pin assignment

X:Rank



Halogen-Free

Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-500	mA
P_C	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	417	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

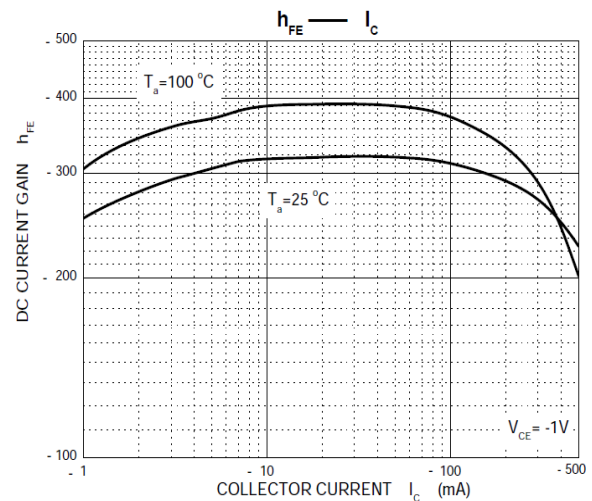
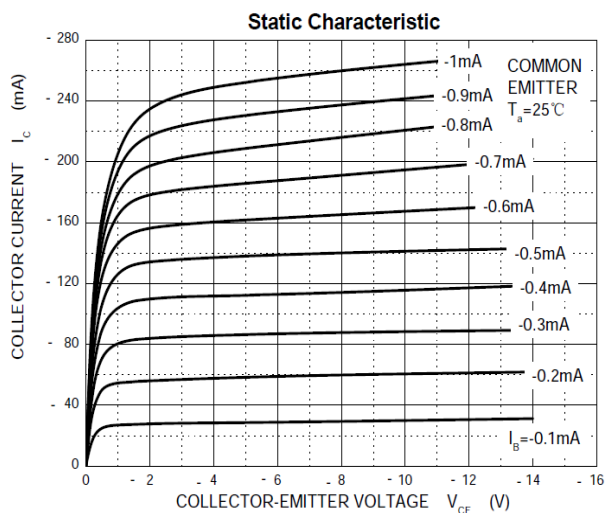
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BC807	SOT-23	5A/5B/5C	3,000	45,000	180,000	7"reel

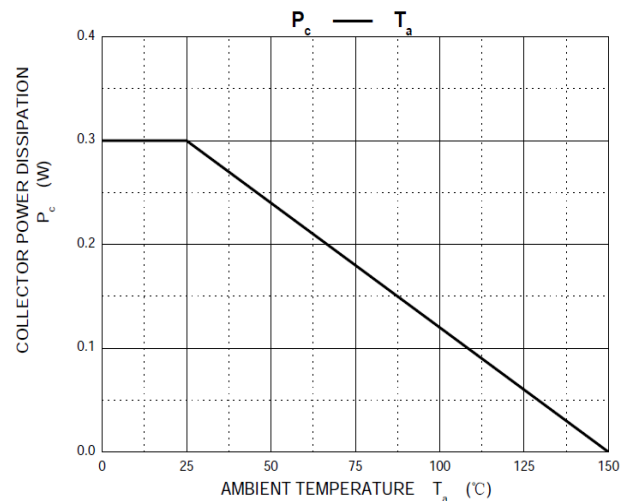
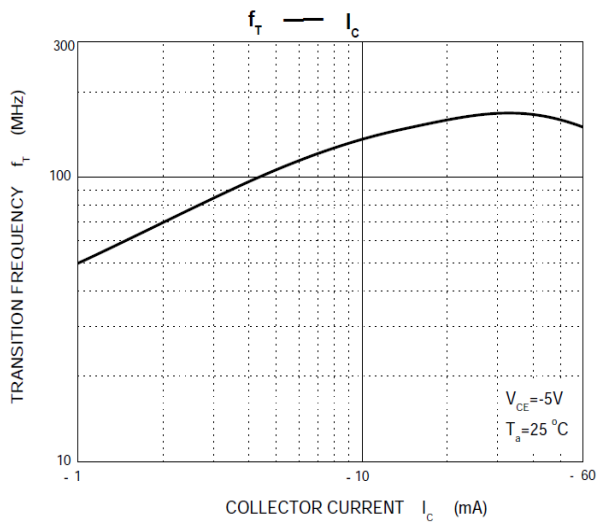
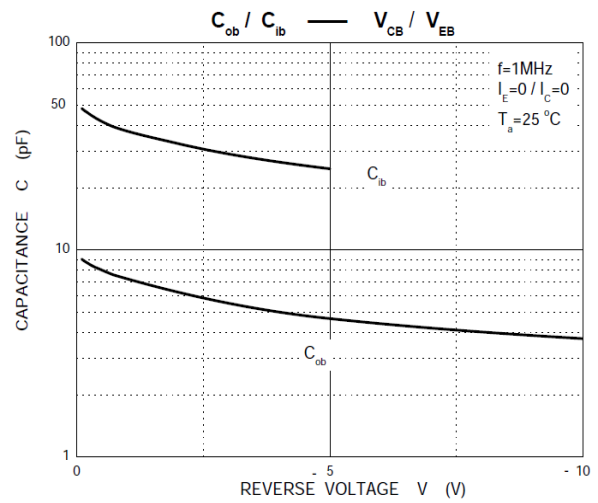
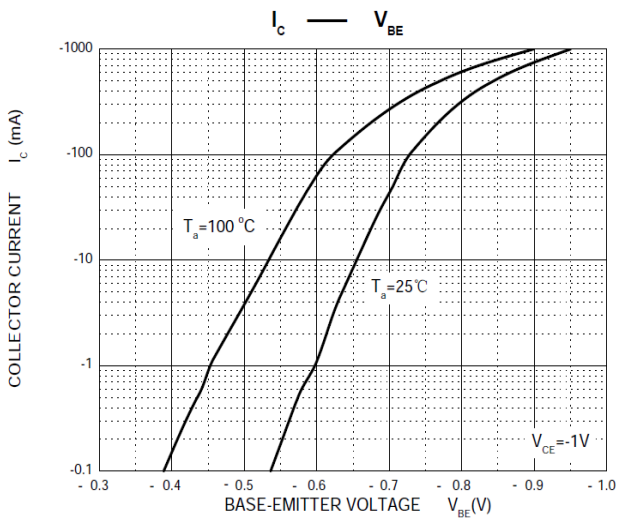
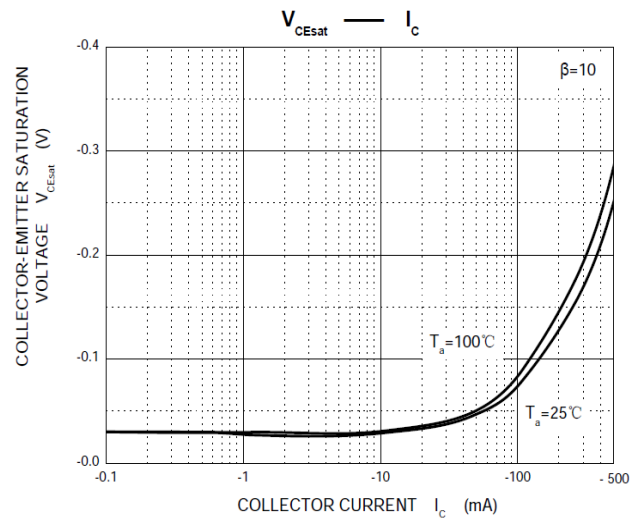
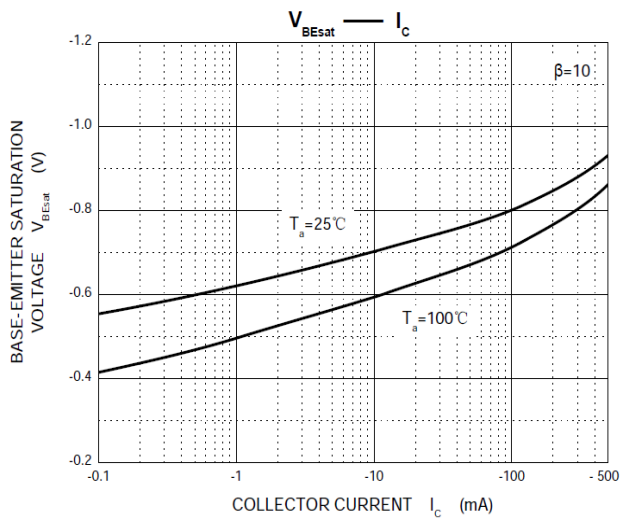
Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -10\mu A, I_E = 0$	-50	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -10mA, I_B = 0$	-45	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -1\mu A, I_C = 0$	-5	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB} = -45V, I_E = 0$	--	--	-0.1	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = -4V, I_C = 0$	--	--	-0.1	μA
$H_{FE(1)}$	DC current gain	$V_{CE} = -1V, I_C = -100mA$	100	--	600	
$H_{FE(2)}$	DC current gain	$V_{CE} = -1V, I_C = -500mA$	40	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -500mA, I_B = -50mA$	--	--	-0.7	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C = -500mA, I_B = -50mA$	--	--	-1.2	V
f_T	Transition frequency	$V_{CE} = -5V, I_C = -10mA, f = 100MHz$	100	--	--	MHz

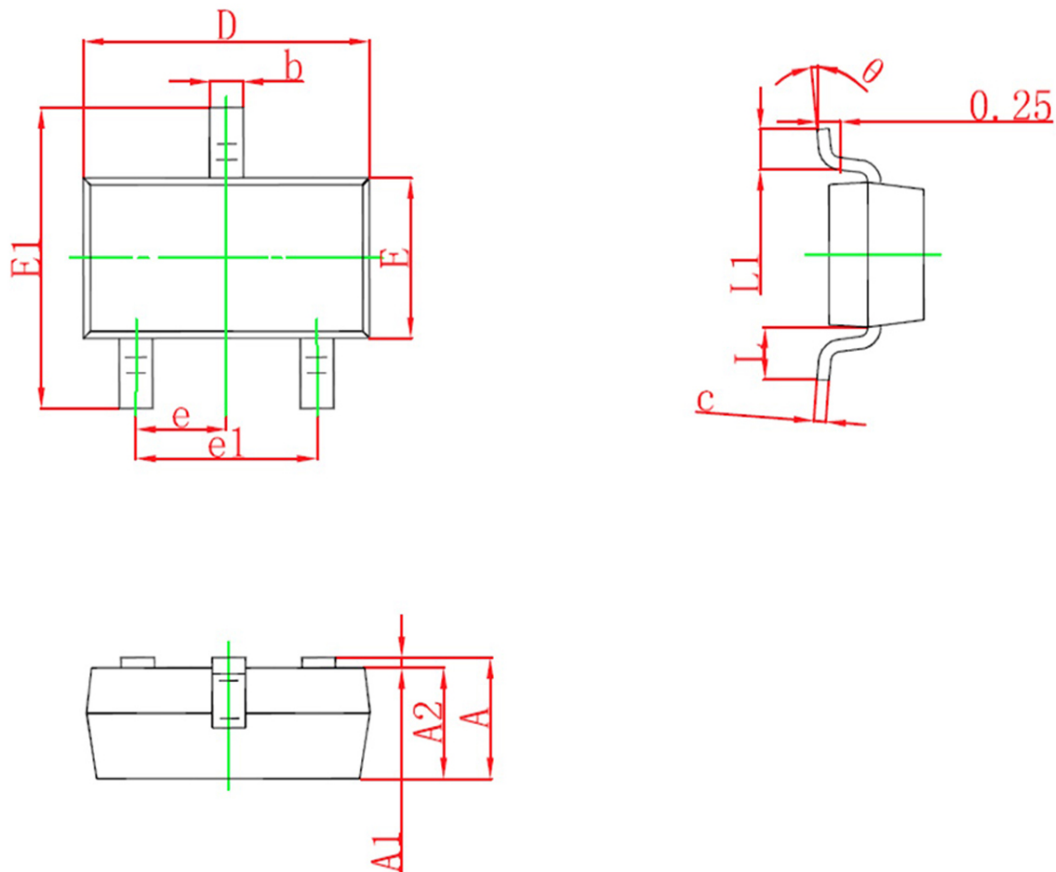
Classification of hFE

Rank	A	B	C
Marking	5A	5B	5C
Range	100-250	160-400	250-600

Typical Operating Characteristics




SOT-23 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E1	2.250	2.550	0.088	0.100
E	1.200	1.400	0.047	0.055
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°