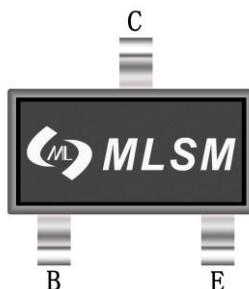
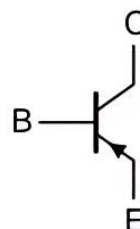


Features

- Ideally suited for automatic insertion
- For Switching and AF Amplifier



SOT-523 top view



Schematic diagram



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	-6	V
I_C	Collector Current	-0.1	A
P_C	Collector Power Dissipation	150	W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

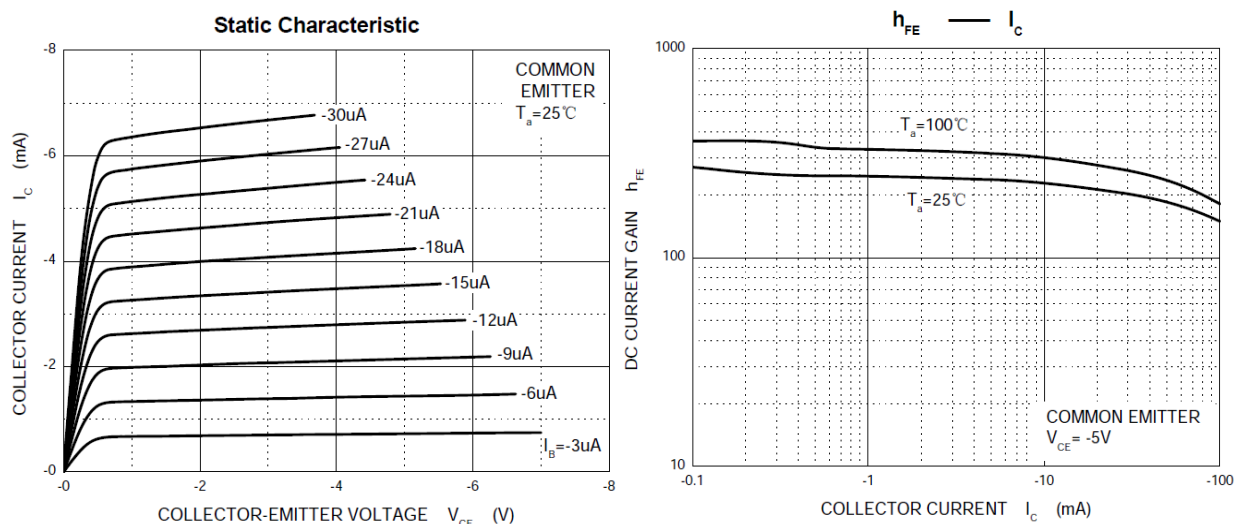
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BC857T	SOT-523	3E/3F/3G	3,000	45,000	180,000	7"reel

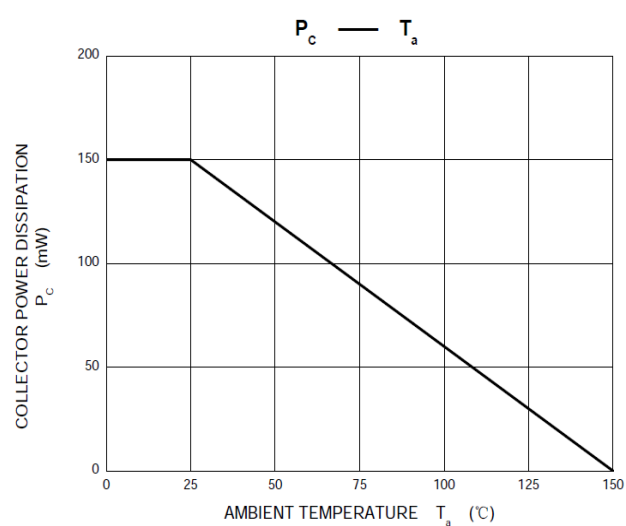
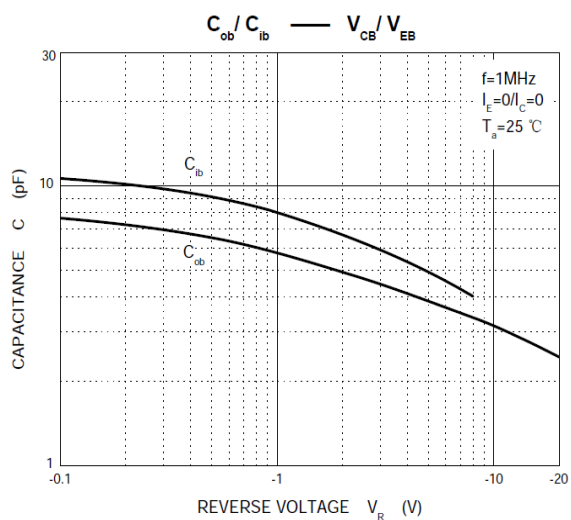
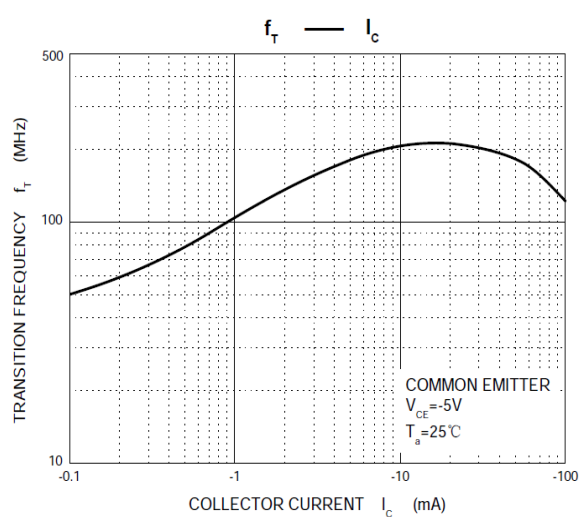
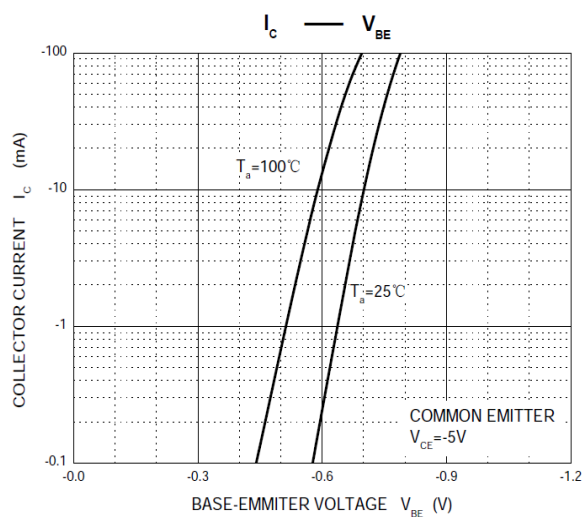
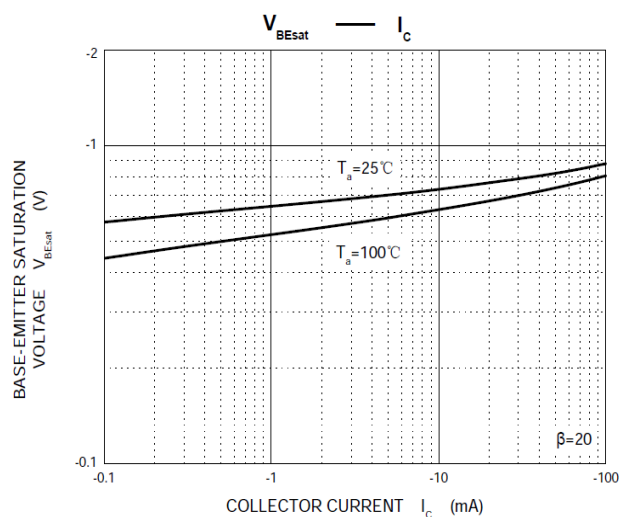
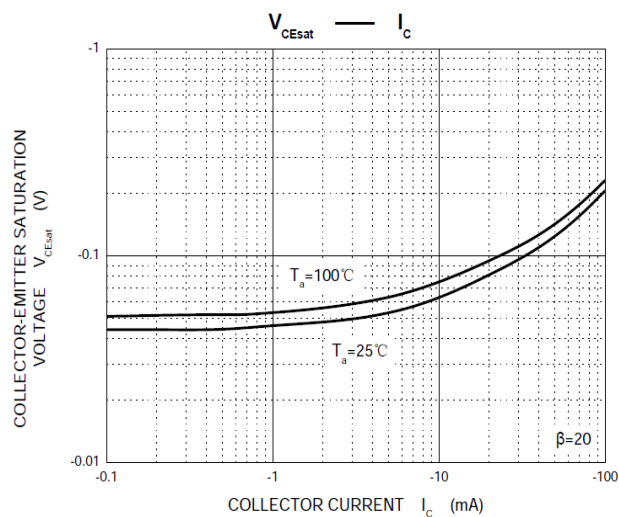
Electrical Characteristics (Ta=25°C unless otherwise specified)

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	$I_E = -1\mu A, I_C = 0$	-6	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB} = 30V$	--	--	-15	nA
h_{FE}	DC current gain	$V_{CE} = -5V, I_C = -2mA$	125	--	800	--
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -10mA, I_B = -0.5mA$	--	--	-0.3	V
		$I_C = -100mA, I_B = -5mA$	--	--	-0.65	
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C = -10mA, I_B = -0.5mA$	--	-0.7	--	V
		$I_C = -100mA, I_B = -5mA$	--	-0.9	--	
$V_{BE(on)}$	Base-emitter voltage	$V_{CE} = -5V, I_C = -2mA$	-600	--	-750	mV
		$V_{CE} = -5V, I_C = -10mA$	--	--	-820	
C_{ob}	Collector output capacitance	$V_{CB} = -10V, f = 1MHz$			4.5	pF
NF	Noise figure	$V_{CE} = -5V, I_C = -0.2mA, f = 1kHz, R_S = 2k\Omega$			10	dB
f_T	Transition frequency	$V_{CE} = -5V, I_C = -10mA, f = 100MHz$	100	--	--	MHz

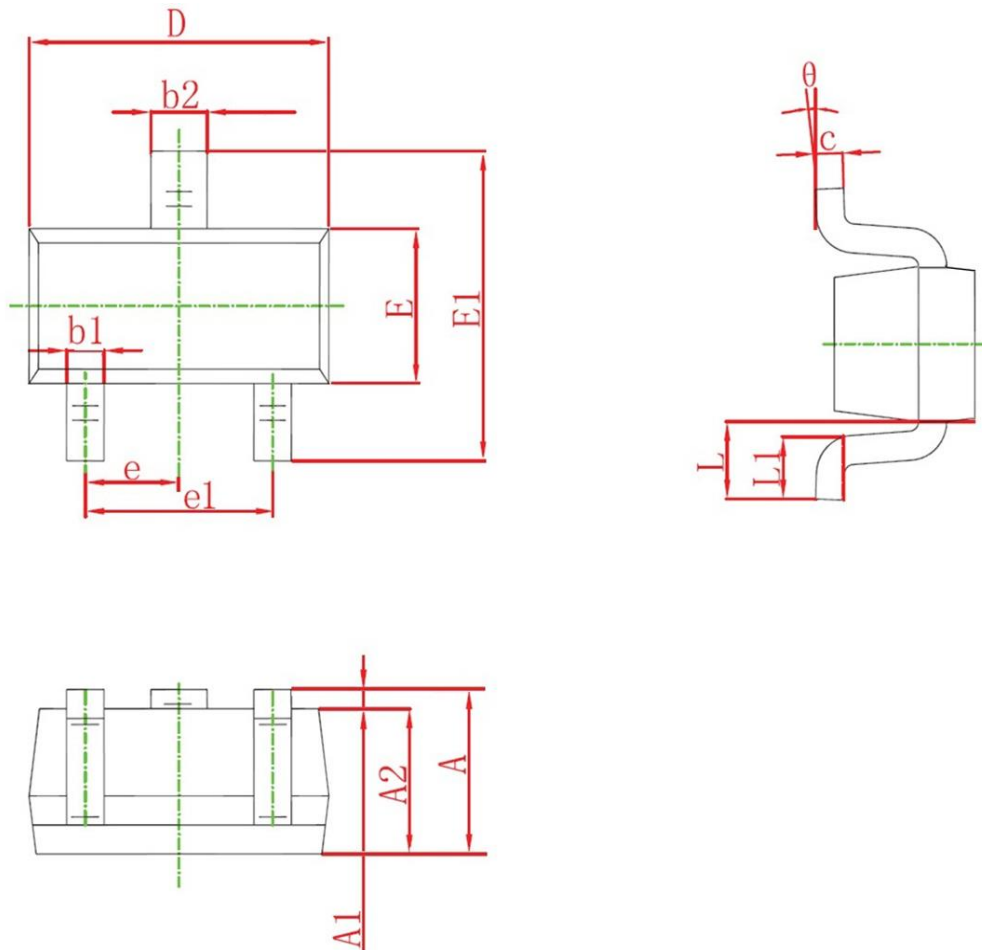
Classification of hFE

Rank	A	B	C
Marking	3E	3F	3G
Range	125-250	220-475	420-800

Typical Characteristics




SOT-523 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500TYP		0.020TYP	
e1	0.900	1.100	0.035	0.043
L	0.400REF		0.016REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°