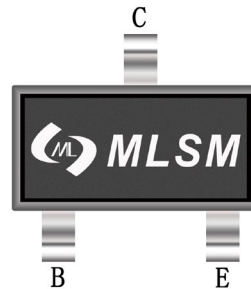
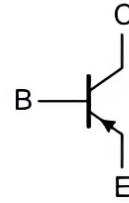


Features

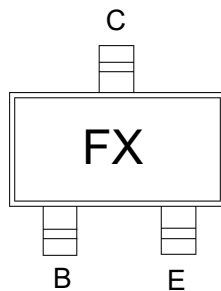
- Reduces Board Space
- High h_{FE}
- Low $V_{CE(sat)}$



SOT-523 top view



Schematic diagram



Marking and pin assignment



Halogen-Free

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-150	mA
P_C	Collector Power Dissipation	150	mW
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
2SA1774	SOT-523	FQ/FR/FS	3,000	45,000	180,000	7"reel

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

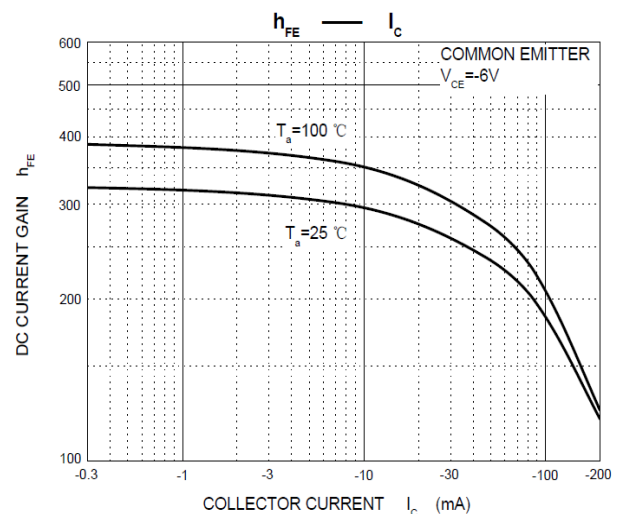
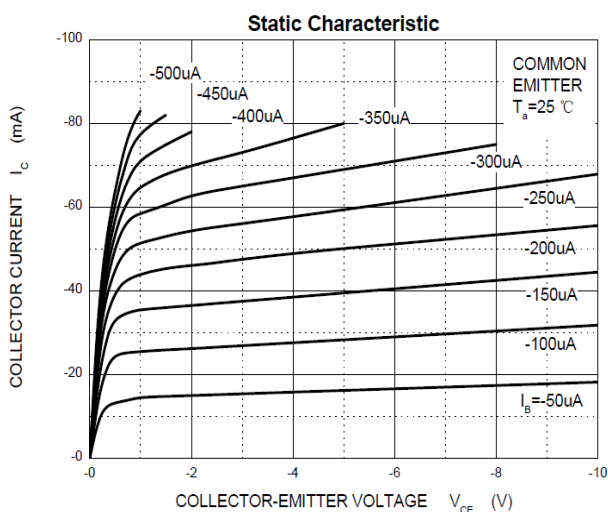
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -50\mu A, I_E = 0$	-60	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1.0mA, I_B = 0$	-50	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -50\mu A, I_C = 0$	-6.0	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB} = -60V, I_E = 0$	--	--	-0.1	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = -6V, I_C = 0$	--	--	-0.1	μA
$h_{FE}^{(1)}$	DC current gain	$V_{CE} = -6.0V, I_C = -1.0mA$	120	--	560	
$V_{CE(sat)}^{(2)}$	Collector-emitter saturation voltage	$I_C = -50mA, I_B = -5.0mA$	--	--	-0.5	V
$V_{BE(sat)}^{(2)}$	Base-emitter saturation voltage	$I_C = -50mA, I_B = -5.0mA$	--	--	-1.2	V
f_T	Transition frequency	$V_{CE} = -12V, I_C = -2.0mA, f = 30MHz$	--	140	--	MHz
C_{ob}	Collector output capacitance	$V_{CB} = -12V, I_E = 0, f = 1MHz$	--	3.5	5	pF

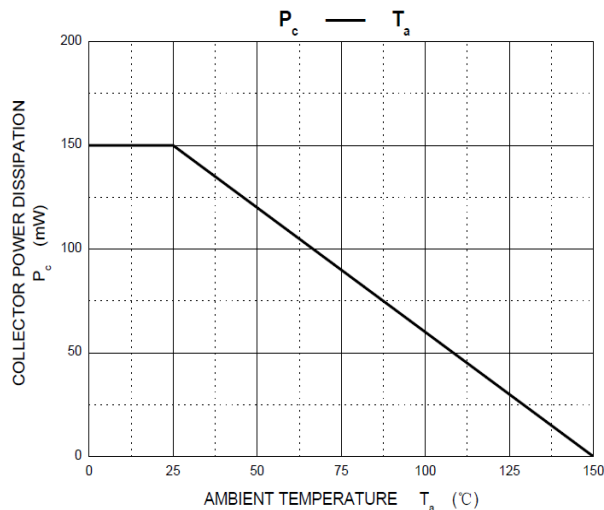
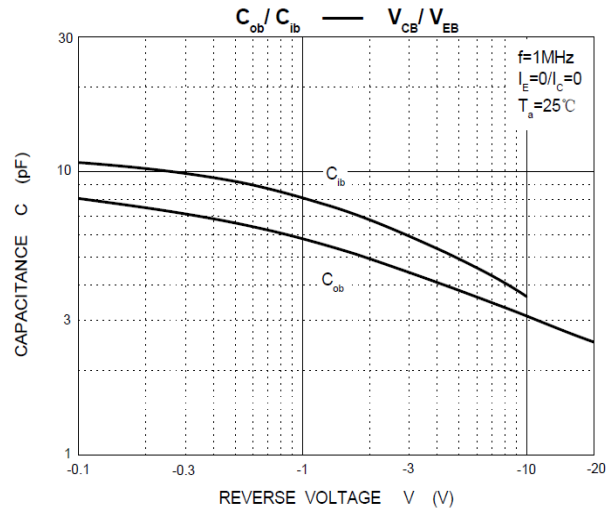
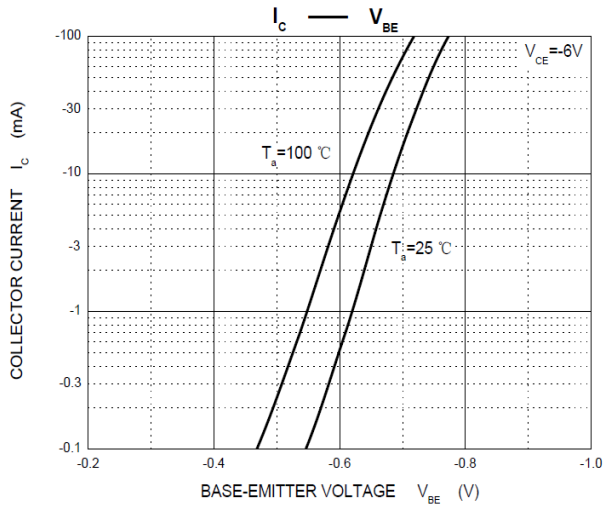
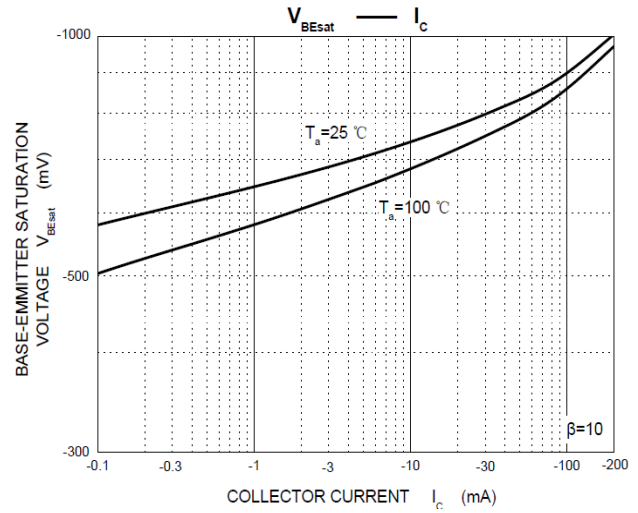
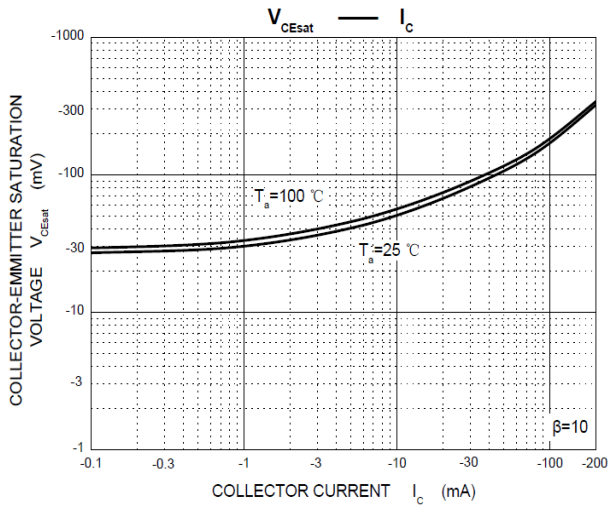
Note(1):

(2).Pulse Test :Pulse Width $\leq 300\mu s$, D.C $\leq 2\%$

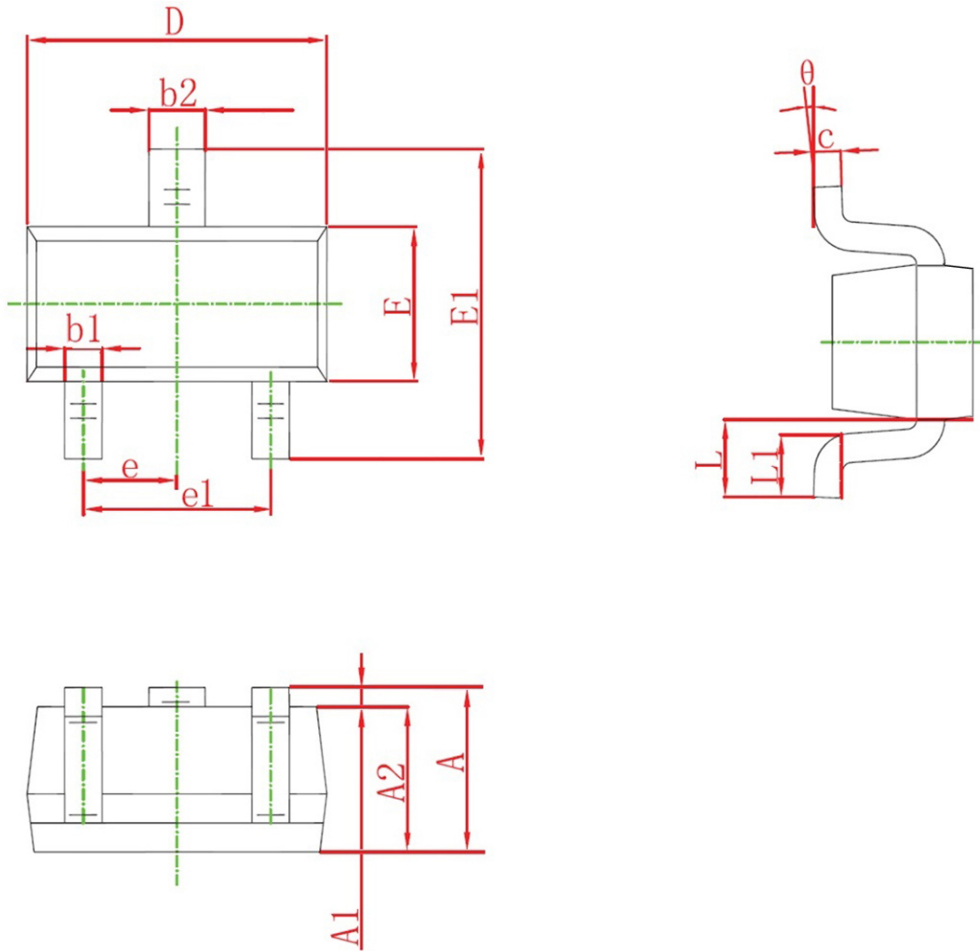
Classification of hFE

Rank	Q	R	S
Marking	FQ	FR	FS
Range	120-270	180-390	270-560

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°