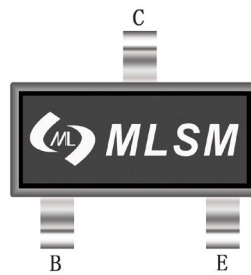
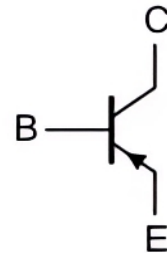


Features

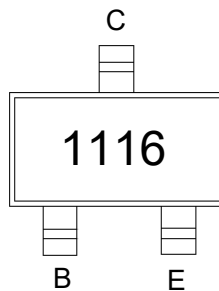
- High Collector Power Dissipation
- Complementary to 2SD1616



SOT-23 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	-1	mA
P_C	Collector Power Dissipation	0.35	mW
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

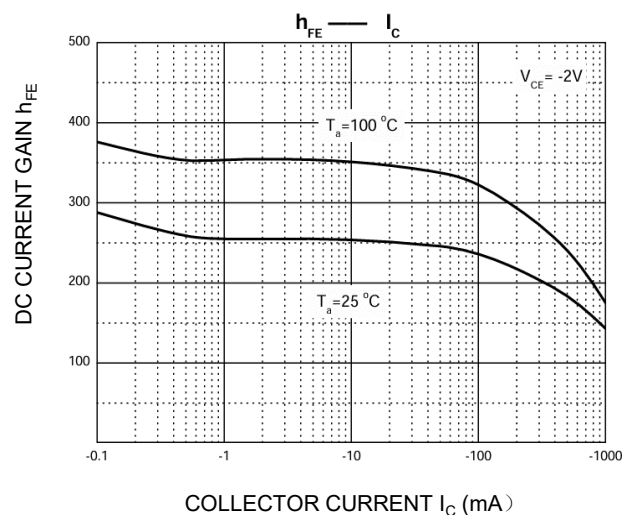
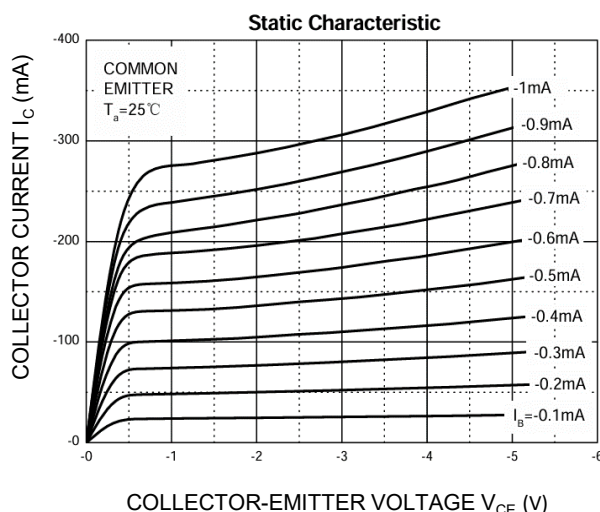
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
2SB1116	SOT-23	1116	3,000	45,000	180,000	7"reel

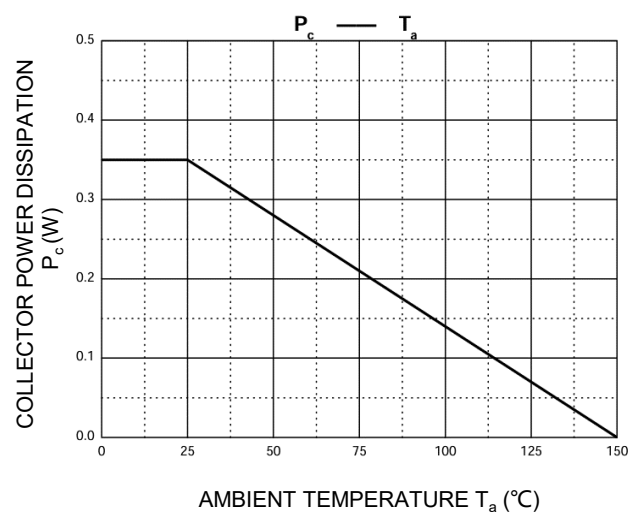
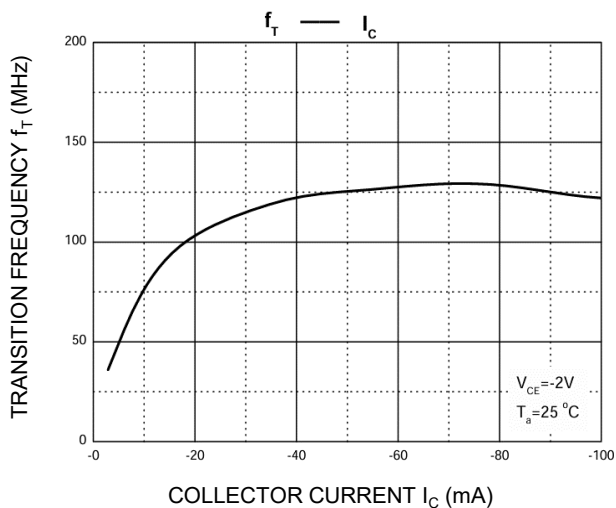
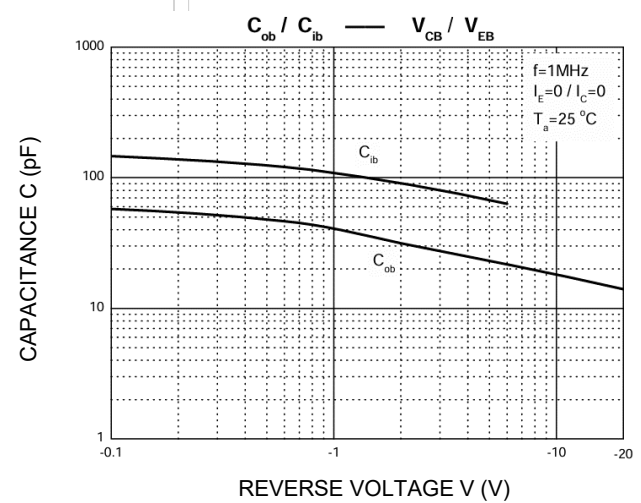
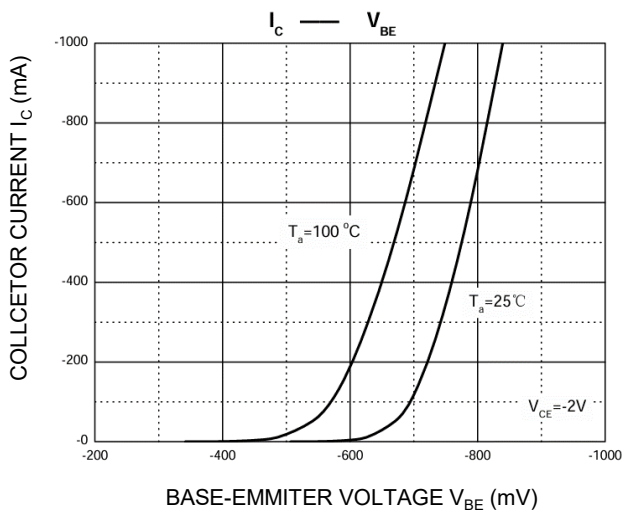
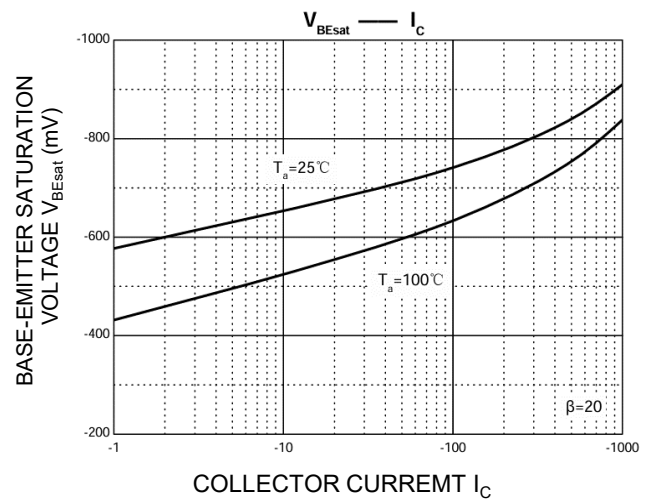
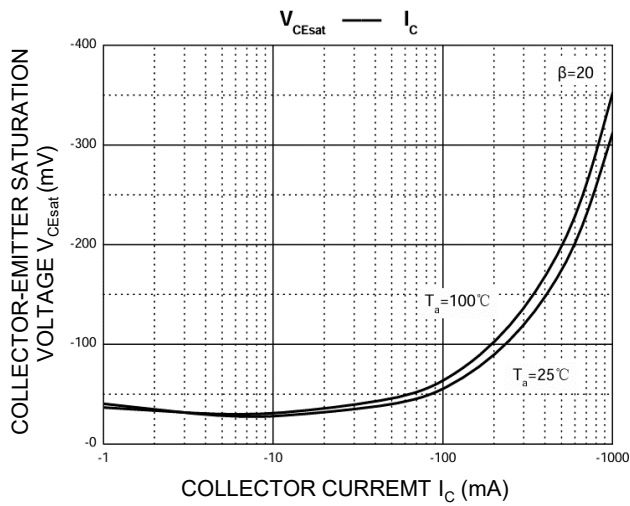
Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=-100\mu A, I_E=0$	-60	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=-1mA, I_B=0$	-50	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=-100\mu A, I_C=0$	-6	--	--	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	$V_{CE}=-2V, I_C=-0.1A$	135	--	400	
$H_{FE(2)}$	DC current gain	$V_{CE}=-2V, I_C=-1A$	81	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=-1A, I_B=-50mA$	--	--	-0.3	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=-1A, I_B=-50mA$	--	--	-1.2	V
V_{BE}	Base-emitter voltage	$V_{CE}=-2V, I_C=-0.05A$	-0.6	--	-0.7	V
C_{ob}	Collector output capacitance	$V_{CB}=-10V, I_E=0, f=1MHz$	--	25	--	pF
f_T	Transition frequency	$V_{CE}=-2V, I_C=-0.1A$	70	--	--	MHz
t_{on}	Turn-on time	$V_{CC}=-10V, I_C=-0.1A, I_{B1}=-I_{B2}=-0.01A$		0.07		μs
t_s	Storage time			0.7		μs
t_f	Fall time			0.07		μs

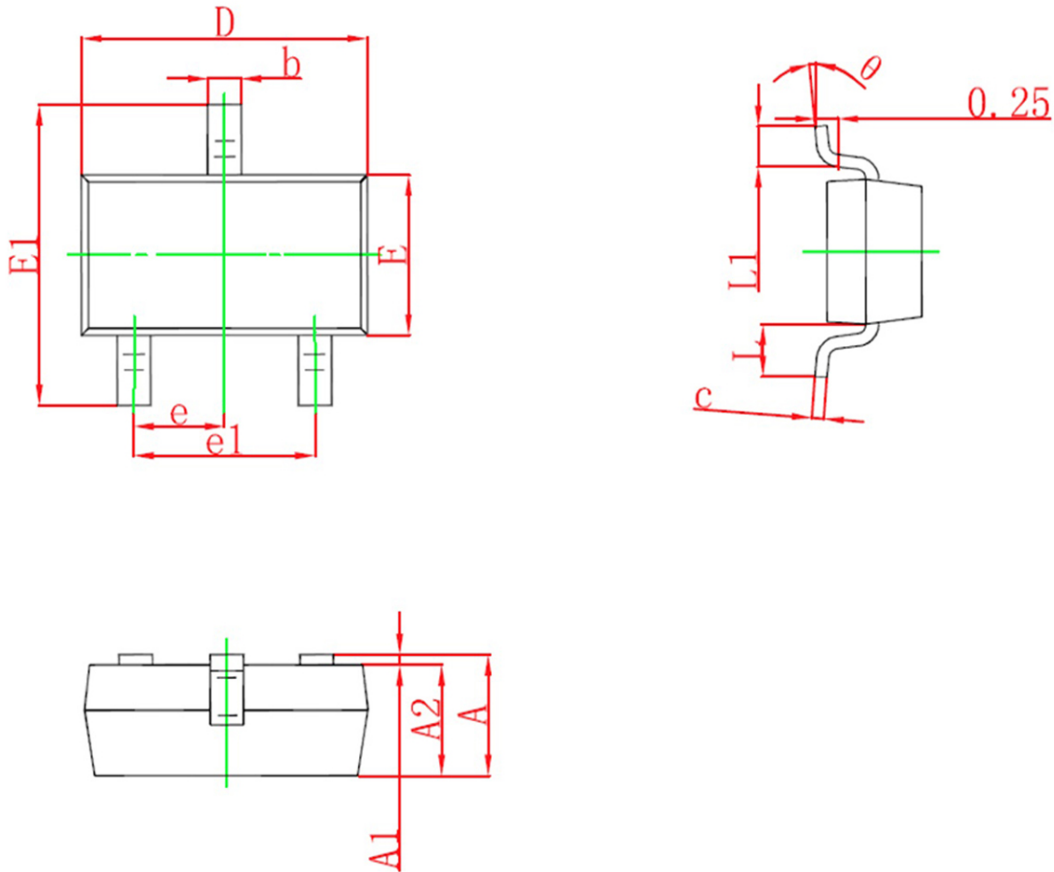
Classification of hFE

Rank	L	K
Marking	1116	1116
Range	135-270	200-400

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	0.950 TYP		0.037 TYP	
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°