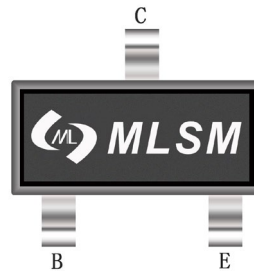
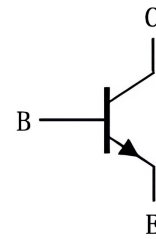


Features

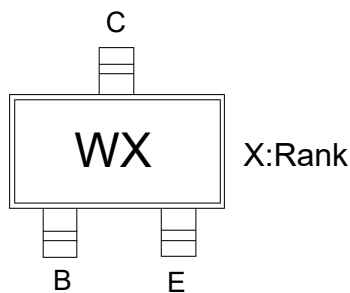
- Excellent hFE Linearity
- Switching Applications



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	35	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	833	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

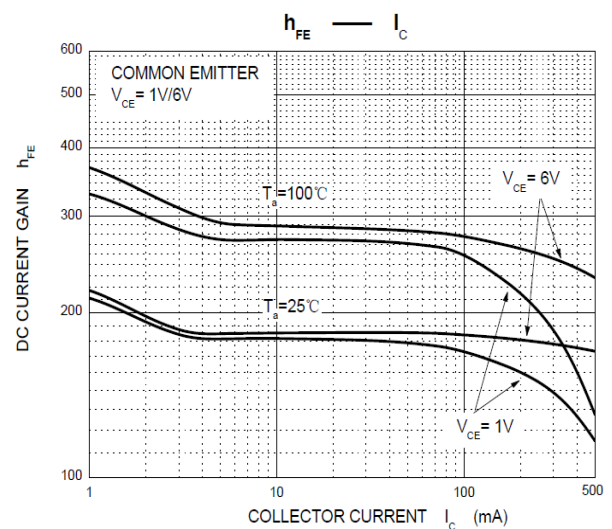
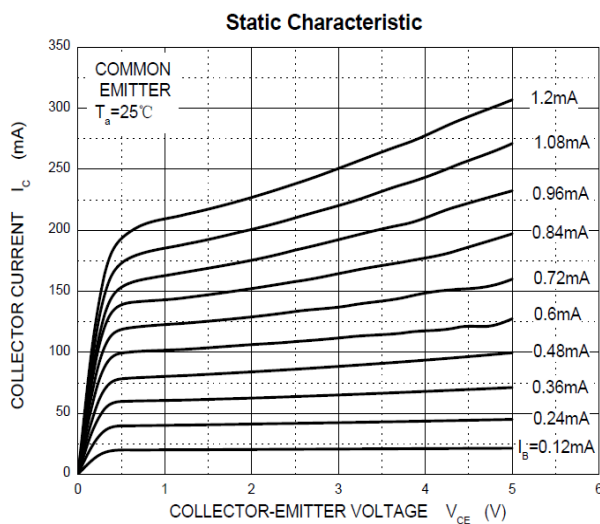
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
2SC2859	SOT-23	WO/WY/WG	3,000	45,000	180,000	7"reel

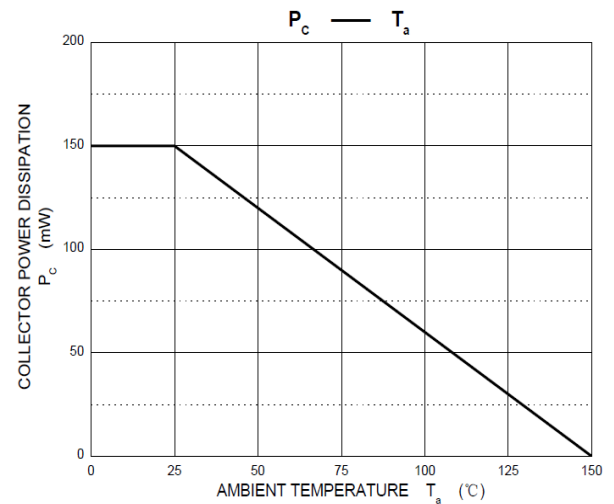
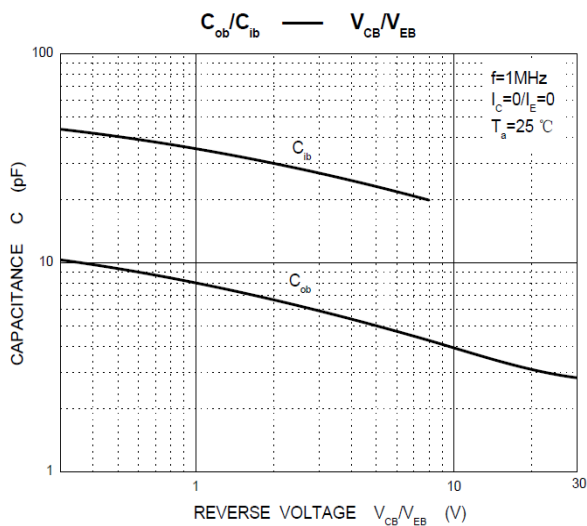
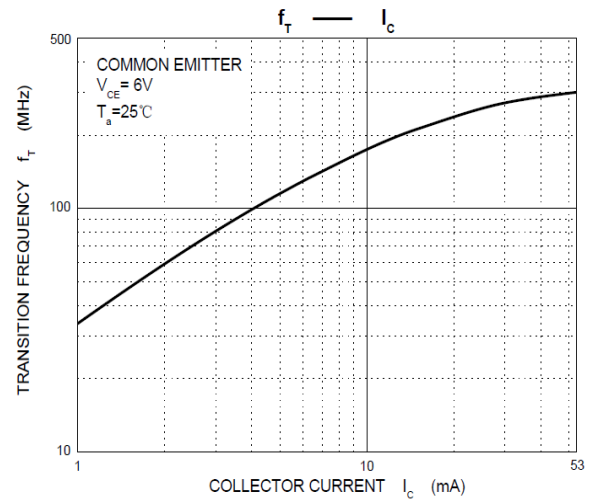
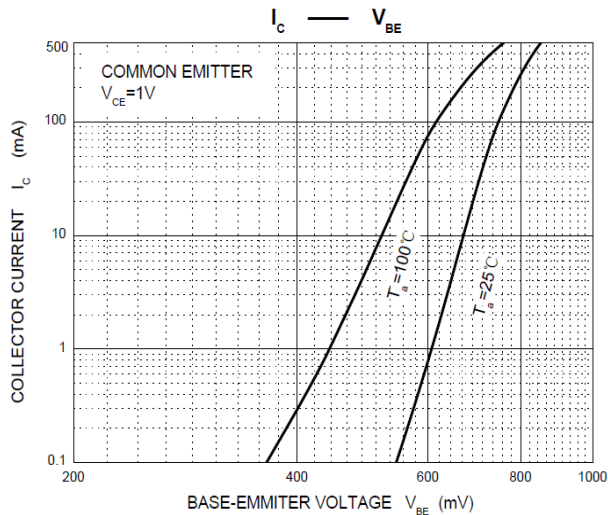
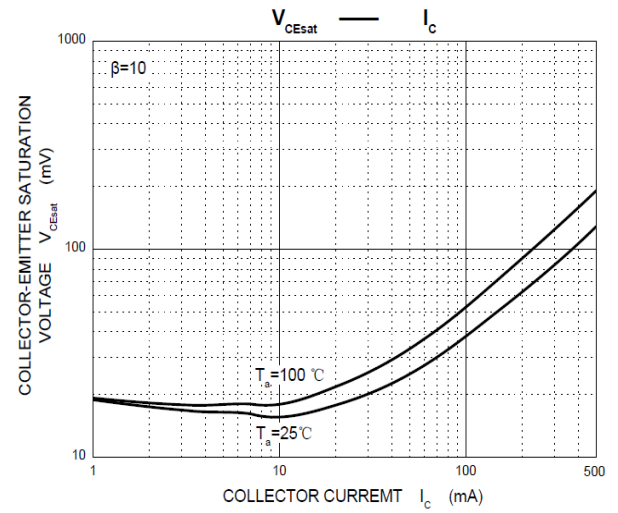
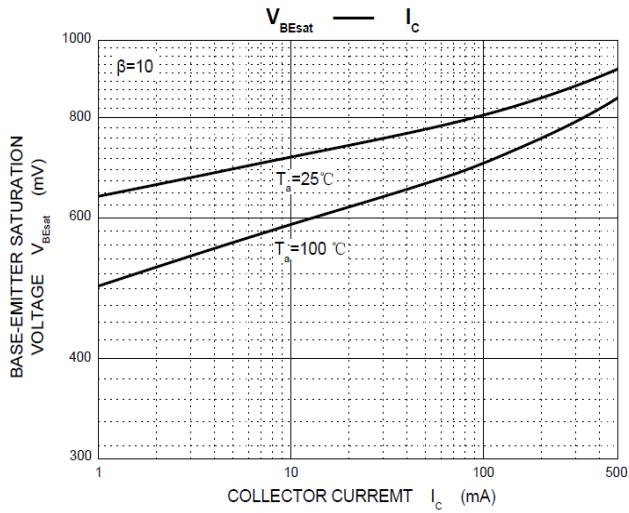
Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu A, I_E=0$	35	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1mA, I_B=0$	30	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=100\mu A, I_C=0$	5	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB}=35V, I_E=0$	--	--	0.1	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V, I_C=0$	--	--	0.1	μA
$h_{FE(1)}$	DC current gain	$V_{CE}=1V, I_C=100mA$	70	--	400	
$h_{FE(2)}$	DC current gain	$V_{CE}=6V, I_C=400mA$	25	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=100mA, I_B=10mA$	--	--	0.25	V
V_{BE}	Base-emitter voltage	$V_{CE}=1V, I_C=100mA$	--	--	1	V
C_{ob}	Collector output capacitance	$V_{CB}=6V, I_E=0, f=1MHz$	--	7	--	pF
f_T	Transition frequency	$V_{CE}=6V, I_C=20mA$	--	300	--	MHz

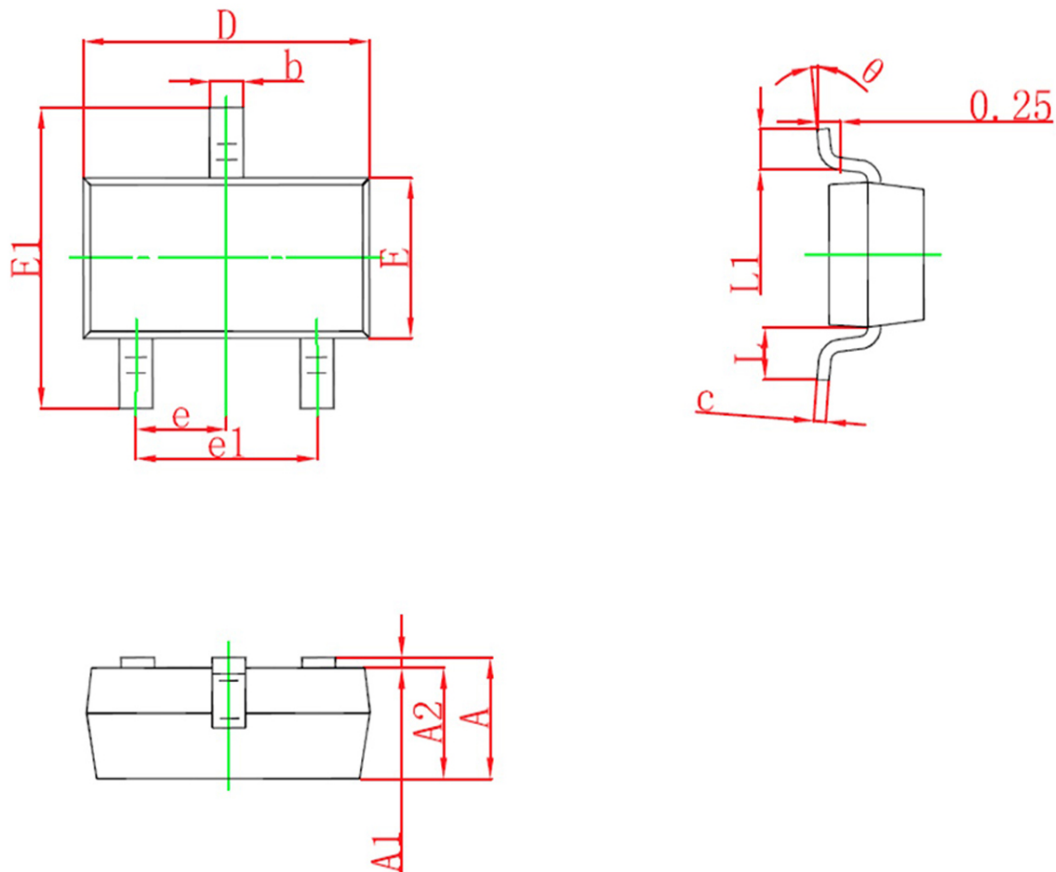
Classification of $h_{FE(1).(2)}$

Rank	O	Y	G
Marking	WO	WY	WG
Range(1)	70-140	120-240	200-400
Range(2)	25Min	40Min	70Min

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°