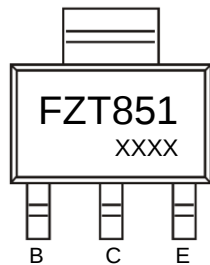


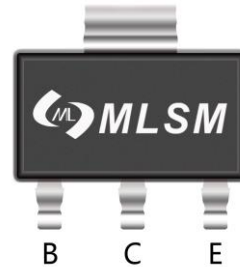
Features

- High Speed Switching
- High collector current
- Low collector-emitter saturation voltage
- Complementary types: FZT951 (PNP)

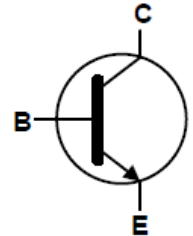


FZT851: Device code
XXXX: code

Marking and pin assignment



SOT-223 top view



Schematic diagram



Pb-Free



Halogen-Free

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

Symbol	Parameter	Rating	Unit
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current -Continuous	6	A
I_{CM}	Peak Pulse Collector Current	20	A
P_C	Collector Power Dissipation	2	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	62.5	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

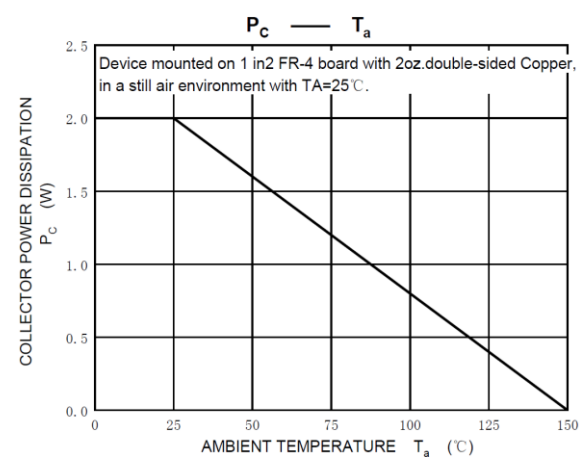
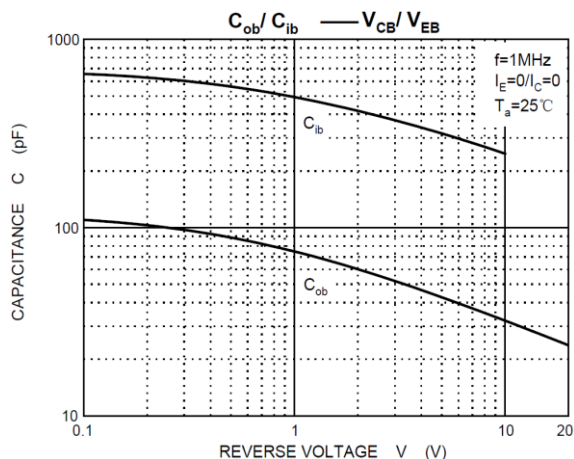
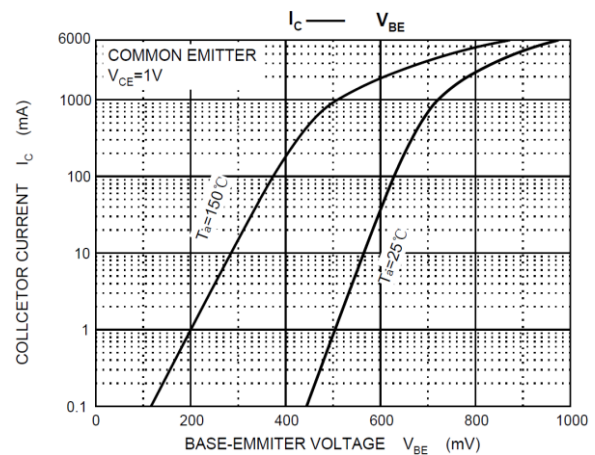
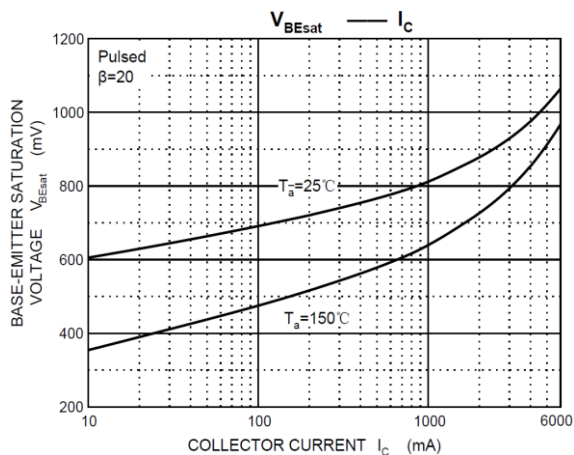
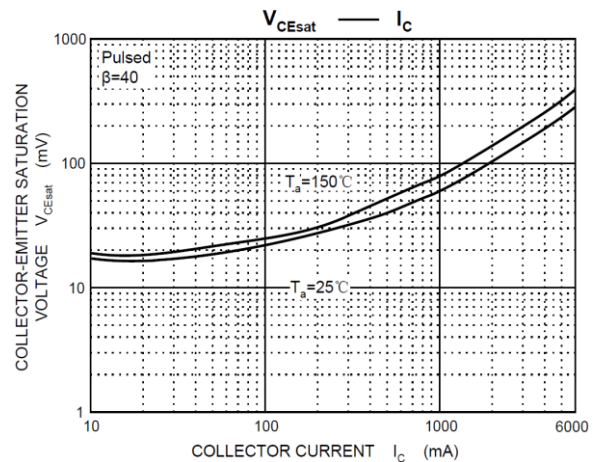
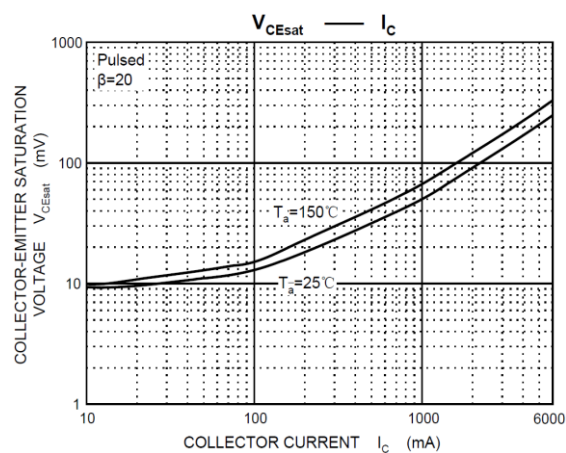
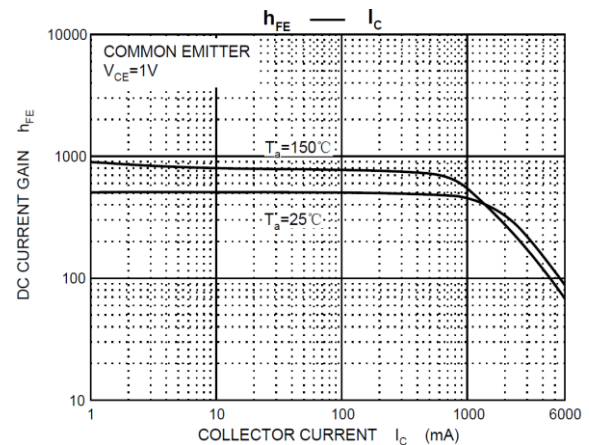
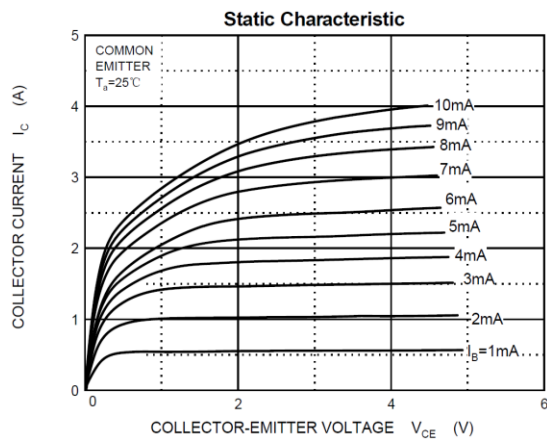
Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
FZT851	SOT-223	FZT851	2,500	5,000	35,000	13" reel

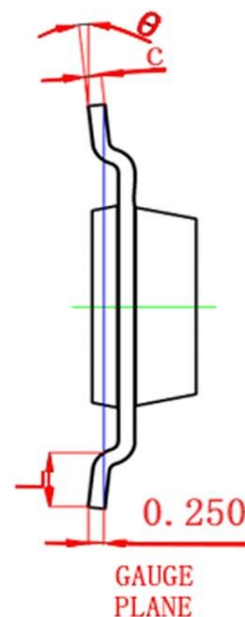
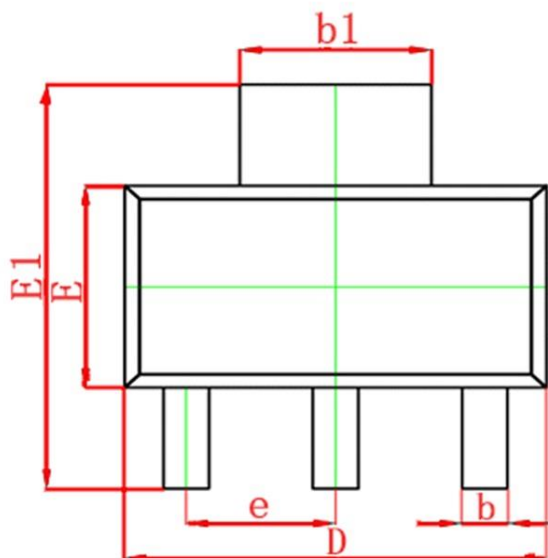
Electrical Characteristics (T_J=25°C unless otherwise noted)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =100μA, I _E =0	150	--	--	V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =10mA, I _B =0	60	--	--	V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =100μA, I _C =0	7	--	--	V
I _{CBO}	Collector cut-off current	V _{CB} =120V, I _E =0	--	--	50	nA
I _{CES}	Collector Cut-Off Current	V _{CE} =48V, I _E =0	--	--	50	nA
I _{EBO}	Emitter cut-off current	V _{EB} = 6V, I _C =0	--	--	10	nA
h _{FE1}	DC current gain	V _{CE} =1V, I _C = 10mA	100	--	--	--
h _{FE2}		V _{CE} =1V, I _C = 2A	100	--	400	
h _{FE3}		V _{CE} =1V, I _C = 5A	55	--	--	
h _{FE4}		V _{CE} =1V, I _C = 10A	20	--	--	
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =100 mA, I _B = 5mA	--	--	0.05	V
		I _C =1A, I _B = 50mA	--	--	0.1	V
		I _C =2A, I _B = 50mA	--	--	0.15	V
		I _C =6A, I _B = 300mA	--	--	0.35	V
V _{BE(sat)}	Base-emitter saturation voltage	I _C =6A, I _B = 300mA	--	--	1.1	V
f _T	Transition frequency	V _{CE} =10V, I _C = 100mA, f=50MHz	30	--	--	MHz
C _{ob}	Collector output capacitance	V _{CB} =10V, I _E =0, f=1MHz	--	35	--	pF
V _{BE(on)}	Base-emitter voltage	V _{CE} =1V, I _C = 6A	--	--	1.05	V

Typical Operating Characteristics



SOT-223 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	--	1.800	--	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	3.300	3.700	0.130	0.146
E1	6.700	7.300	0.264	0.287
e	2.300(BSC)		0.091(BSC)	
L	0.750	--	0.030	--
θ	0°	10°	0°	10°