PNP Silicon Epitaxial Planar Transistor

FZT751

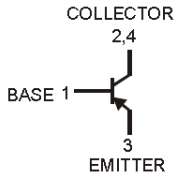
Features

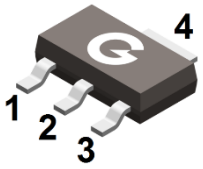
- Epitaxial planar die construction
- High continuous collector current
- Low saturation voltage $V_{CE(SAT)}$

HF

Mechanic al Data

- Case: SOT-223
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208





SOT-223

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
FZT751	SOT-223	4000 pcs / Tape & Reel	FZT751

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	-80	V
Collector-Emitter Breakdown Voltage	V_{CEO}	-60	V
Emitter-Base Breakdown Voltage	V_{EBO}	-5	V
Collector Current (Continuous)	I_C	-3	A
Collector Current (Pulse)	I_{CM}	-6	A

Thermal Characteristics

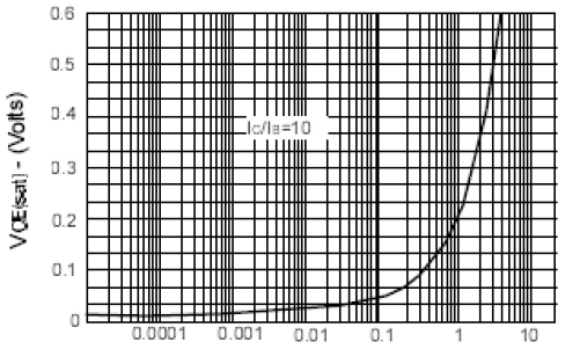
Parameter	Symbol	Value	Unit
Power Dissipation(T_A = 25°C)	P_D	2	W
Thermal Resistance (Junction-to-Ambient)	$R_{\theta JA}$	62.5	°C/W
Junction Temperature	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

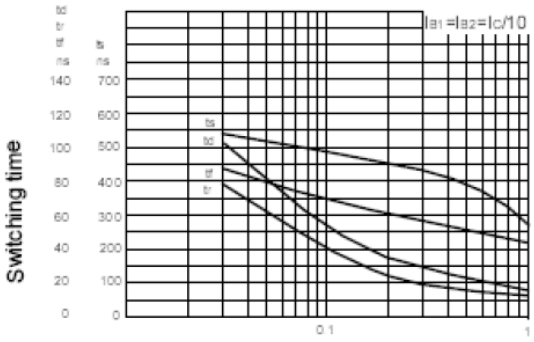
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = -100μA, I_E = 0	-80	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = -10mA, I_B = 0	-60	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = -100μA, I_C = 0	-5	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} = -80V, I_E = 0	-	-	-100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB} = -4V, I_C = 0	-	-	-100	nA
DC Current Gain *1	h_{FE}	V_{CE} = -2V, I_C = -50mA	75	-	-	-
		V_{CE} = -2V, I_C = -500mA	75	-	-	-
		V_{CE} = -2V, I_C = -1A	75	-	-	-
		V_{CE} = -2V, I_C = -2A	40	-	-	-
Collector-emitter Saturation Voltage *1	$V_{CE(sat)}$	I_C = -1A, I_B = -100mA	-	-	-0.3	V
		I_C = -3A, I_B = -300mA	-	-	-0.6	V
Base-emitter Saturation Voltage *1	$V_{BE(sat)}$	I_C = -1A, I_B = -100mA	-	-	-1.25	V
Base-Emitter Turn-On Voltage *1	$V_{BE(ON)}$	I_C = -1A, V_{CE} = -2V	-	-	-1	V
Output Capacitance	C_{OBO}	V_{CB} = -10V, I_E = 0, f = 1MHz	-	-	30	pF
Transition Frequency	f_T	I_C = -100mA, V_{CE} = -5V f = 100MHz	100	-	-	MHZ
Turn-on Time	t_{on}	V_{CC} = -10V, I_C = -0.5A, I_{B1} = -I_{B2} = -50mA	-	40	-	ns
Turn-off Time	t_{off}		-	450	-	ns

Note 1. Measured under pulsed conditions. Pulse width ≤ 300μs. Duty cycle ≤ 2%

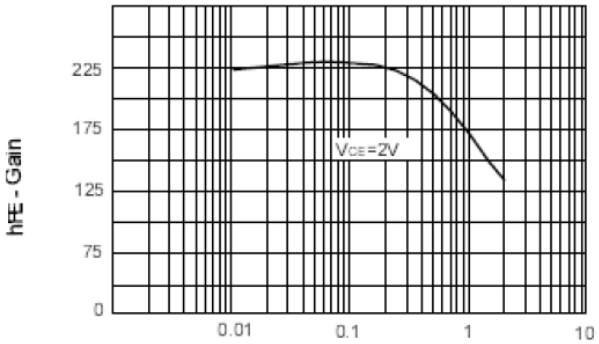
Ratings and Characteristics Curves (@ T_A = 25°C unless otherwise specified)



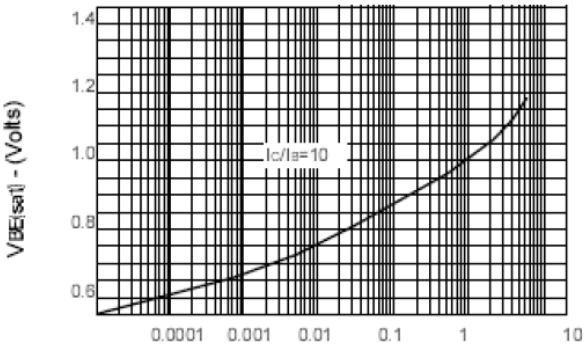
VCE(sat) v IC



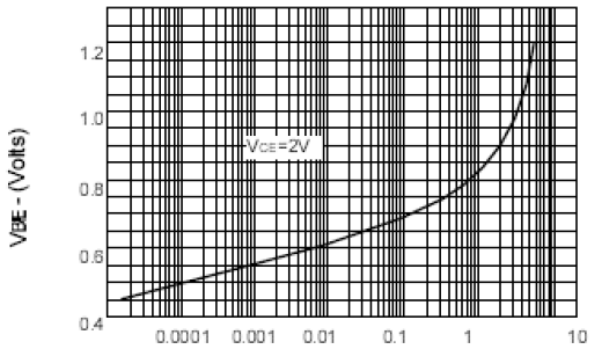
Switching Speeds



hFE v IC

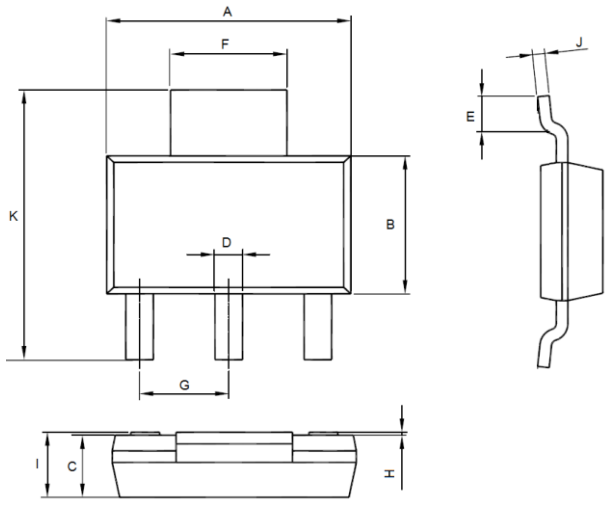


VBE(sat) v IC



VBE(on) v IC

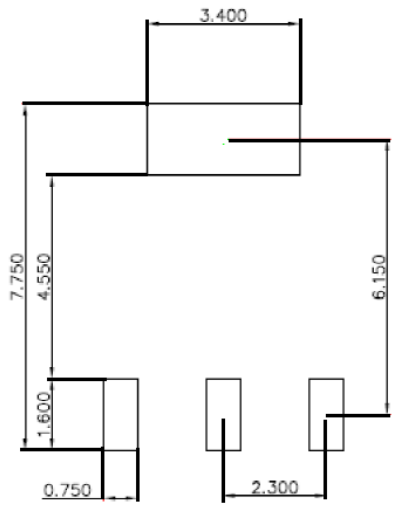
Package Outline Dimensions (Unit: mm)



SOT-223		
Dimension	**Min.**	**Max.**
A	6.10	6.50
B	3.30	3.70
C	1.50	1.70
D	0.66	0.82
E	0.90	1.15
F	2.90	3.10
G	2.20	2.40
H	0.02	0.10
I	1.52	1.80
J	0.20	0.40
K	6.70	7.30

Mounting Pad Layout (Unit: mm)

SOT-223



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