

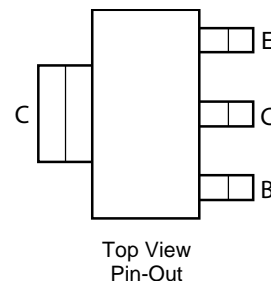
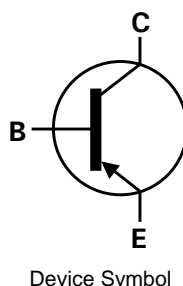
PNP SILICON PLANAR HIGH PERFORMANCE TRANSISTOR IN SOT223

Features

- $BV_{CEO} > 60V$
- Maximum continuous current $I_{C(cont)} = 3A$
- Low Saturation Voltage
- Complementary Type – FZT651
- **RoHS Compliant**
- **Halogen and Antimony Free. "Green" Device (Note 1)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

- Case: SOT223
- UL Flammability Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish
- Weight: 0.112 grams (approximate)

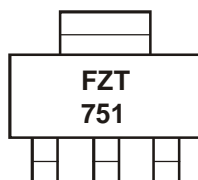


Ordering Information (Note 2)

Product	Marking	Reel size (inches)	Tape width (mm)	Quantity per reel
FZT751TA	FZT751	7	12	1,000
FZT751TC	FZT751	13	12	4,000

Notes: 1. Diodes Inc's "Green" Policy can be found on our website at <http://www.diodes.com>
2. For Packaging Details, go to our website at <http://www.diodes.com>.

Marking Information



FZT751 = Product Type Marking Code

Maximum Ratings @T_A = 25°C unless otherwise specified

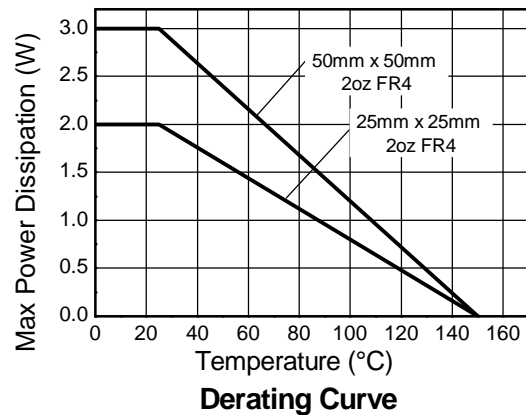
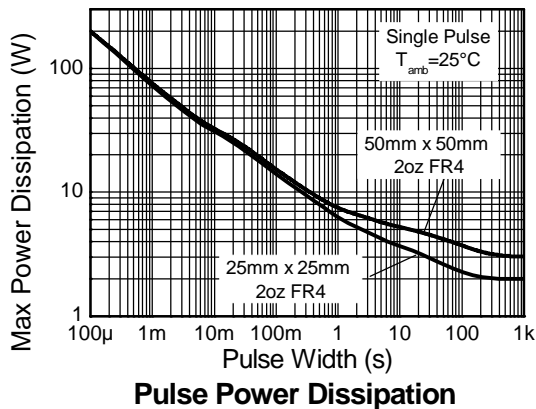
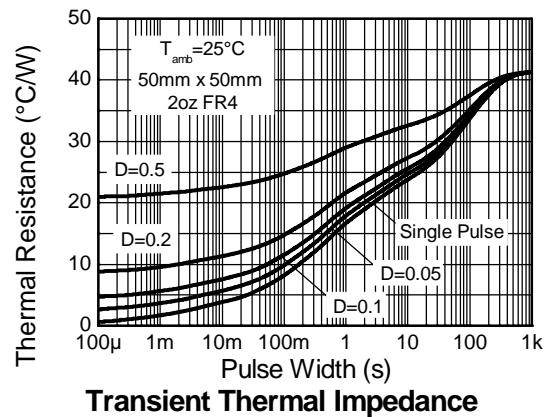
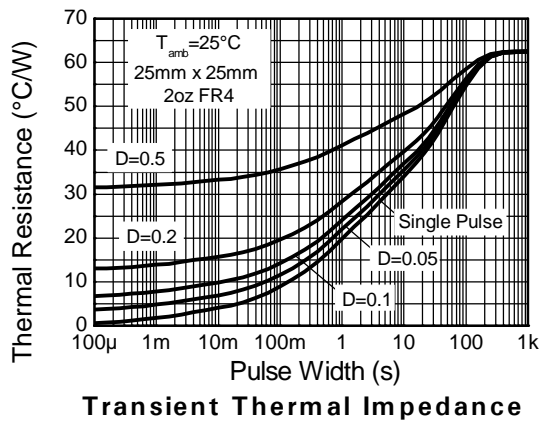
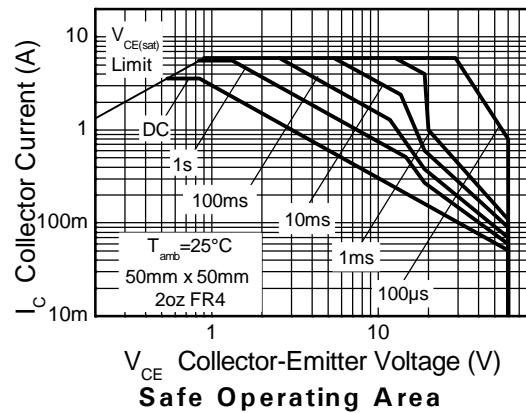
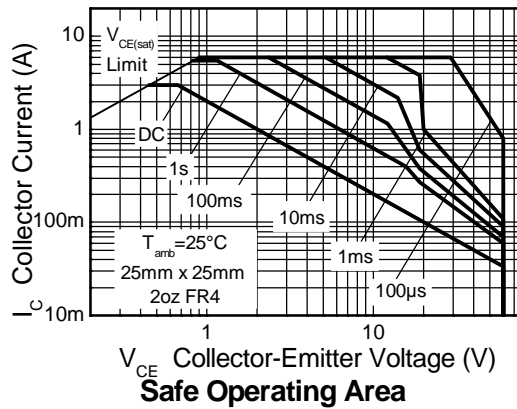
Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-80	V
Collector-Emitter Voltage	V _{CEO}	-60	V
Emitter-Base Voltage	V _{EBO}	-5	V
Continuous Collector Current	I _C	-3	A
Peak Pulse Current	I _{CM}	-6	A

Thermal Characteristics @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Value	Unit
Power Dissipation	(Note 3)	P _D	2	W
	(Note 4)		3	W
Thermal Resistance, Junction to Ambient	(Note 3)	R _{θJA}	62.5	°C/W
	(Note 4)		41.7	°C/W
Thermal Resistance, Junction to Leads	(Note 5)	R _{θJL}	12.93	°C/W
Operating and Storage Temperature Range		T _J , T _{STG}	-55 to +150	°C

- Notes:
3. For devices mounted on 25mm x 25mm single sided 2oz weight copper, in still air conditions.
 4. For devices mounted on 50mm x 50mm single sided 2oz weight copper, in still air conditions.
 5. Thermal resistance from junction to solder-point (at the end of the collector lead)

Thermal Characteristics

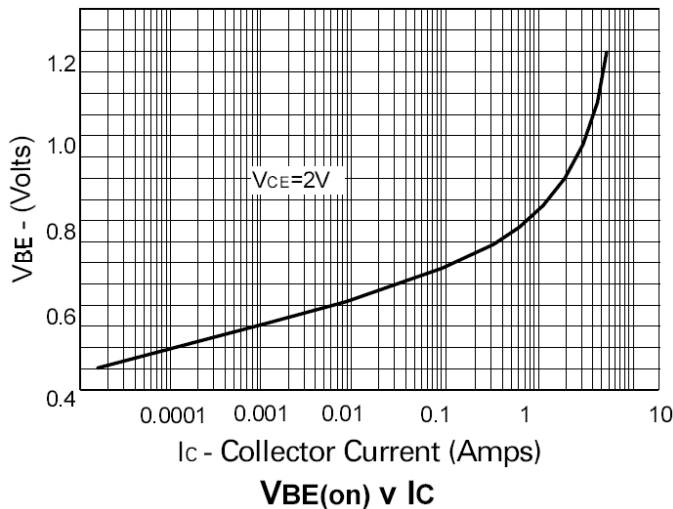
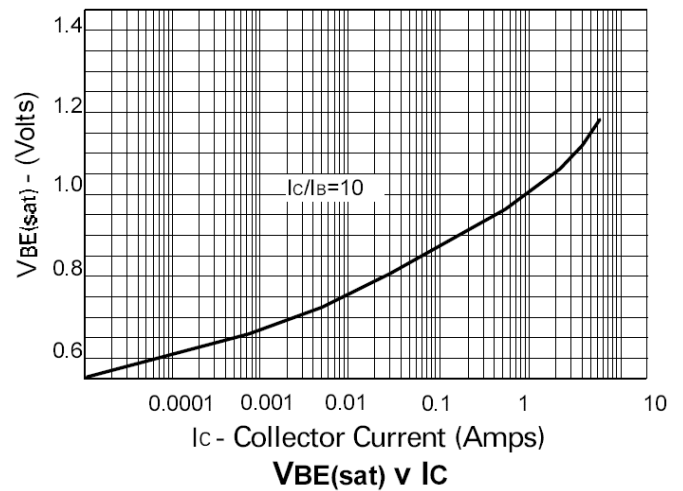
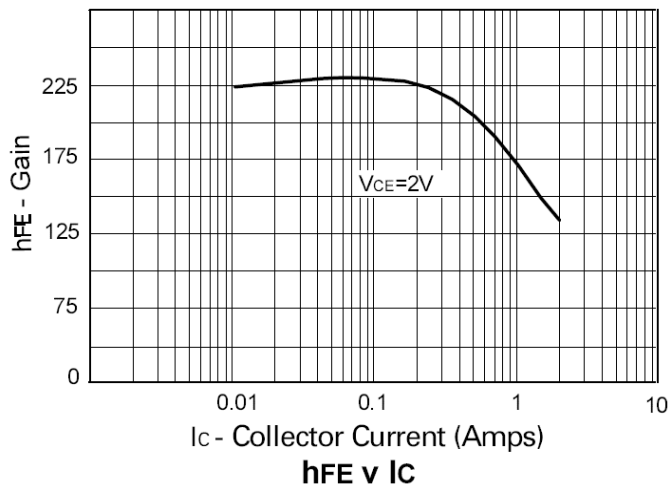
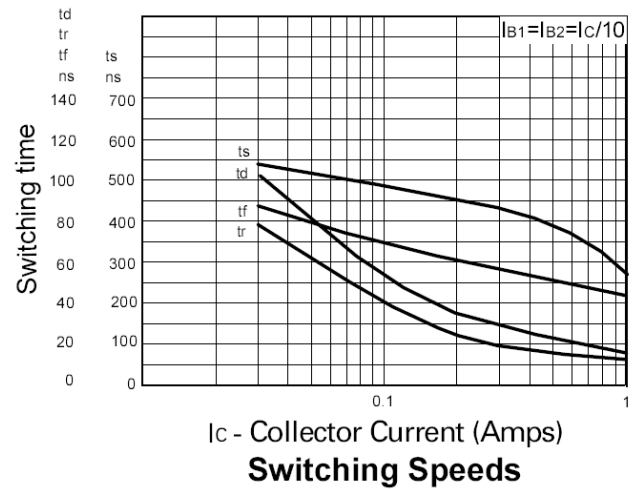
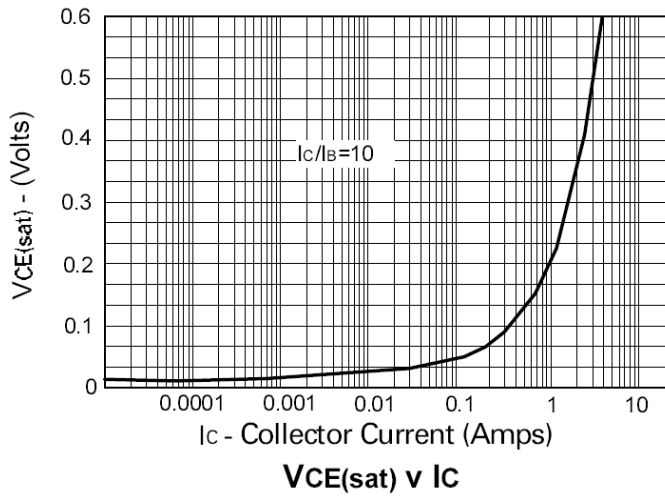


Electrical Characteristics @T_A = 25°C unless otherwise specified

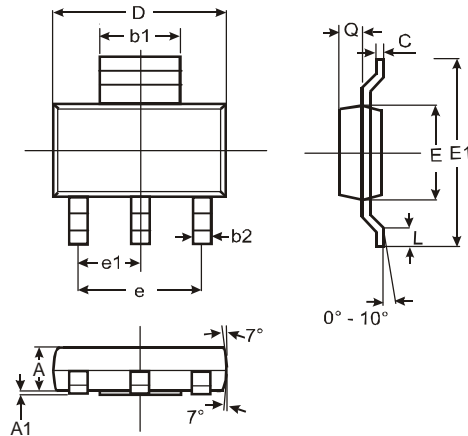
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	BV _{CBO}	-80	—	—	V	I _C = -100μA
Collector-Emitter Breakdown Voltage (Note 6)	BV _{CEO}	-60	—	—	V	I _C = -10mA
Emitter-Base Breakdown Voltage	BV _{EBO}	-5	—	—	V	I _E = -100μA
Collector Cut-off Current	I _{CBO}	—	—	-0.1	μA	V _{CB} = -60V
		—	—	-10		V _{CB} = -60V, T _{amb} = 100°C
Emitter Cut-off Current	I _{EBO}	—	—	-0.1	μA	V _{EB} = -4V
Collector-Emitter Saturation Voltage (Note 6)	V _{CE(sat)}	—	-0.15	-0.3	V	I _C = -1A, I _B = -100mA
		—	-0.45	-0.6		I _C = -3A, I _B = -300mA
Base-Emitter Saturation Voltage (Note 6)	V _{CE(sat)}	—	-0.9	-1.25	V	I _C = -1A, I _B = -100mA
Base-Emitter Turn-On Voltage (Note 6)	V _{BE(on)}	—	-0.8	-1.0	V	I _C = -1A, V _{CE} = -2V
DC Current Gain (Note 6)	h _{FE}	70	200	—	—	I _C = -50mA, V _{CE} = -2V
		100	200	300		I _C = -500mA, V _{CE} = -2V
		80	170	—		I _C = -1A, V _{CE} = -2V
		40	150	—		I _C = -2A, V _{CE} = -2V
Current Gain-Bandwidth Product (Note 6)	f _T	100	140	—	MHz	V _{CE} = -5V, I _C = -100mA f = 100MHz
Turn-On Time	t _{on}	—	40	—	ns	V _{CC} = -10V, I _C = -500mA
Turn-Off Time	t _{off}	—	450	—	ns	I _{B1} = I _{B2} = -50mA
Output Capacitance (Note 6)	C _{obo}	—	—	30	pF	V _{CB} = -10V, f = 1MHz

Notes: 6. Measured under pulsed conditions. Pulse width ≤ 300 μs. Duty cycle ≤ 2%

Typical Characteristics

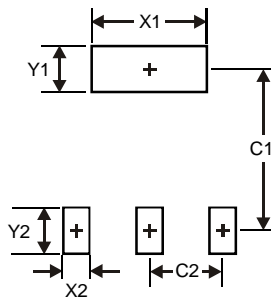


Package Outline Dimensions



SOT223			
Dim	Min	Max	Typ
A	1.55	1.65	1.60
A1	0.010	0.15	0.05
b1	2.90	3.10	3.00
b2	0.60	0.80	0.70
C	0.20	0.30	0.25
D	6.45	6.55	6.50
E	3.45	3.55	3.50
E1	6.90	7.10	7.00
e	—	—	4.60
e1	—	—	2.30
L	0.85	1.05	0.95
Q	0.84	0.94	0.89
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
X1	3.3
X2	1.2
Y1	1.6
Y2	1.6
C1	6.4
C2	2.3

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