PRODUCT DATA SHEET

To learn more about JGSEMI, please visit our website at

Datasheet Resources Samples

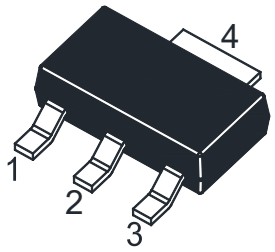
Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

FZT855TA

NPN Silicon Epitaxial Planar Power Transistor

Features

- Halogen and Antimony Free(HAF), RoHS compliant



1.Base 2.Collector 3.Emitter 4.Collector

SOT-223 Plastic Package

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	180	V
Collector Emitter Voltage	V_{CEO}	150	V
Emitter Base Voltage	V_{EBO}	7	V
Collector Current	I_C	2	A
Peak Collector Current, Pulsed	I_{CM}	3	A
Total Power Dissipation	P_D	2 [1)]	W
Total Power Dissipation	P_D	3 [2)]	W
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	62.5 [1)] 41.7 [2)]	℃/W

[1)] Device mounted on FR-4 substrate PC board, 2oz copper, with 1-inch square copper plate in still air.
[2)] Device mounted on FR-4 substrate PC board, 2oz copper, with 2-inch square copper plate in still air.

Characteristics at T_a = 25℃ unless otherwise specified

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 5 V, I_C = 10 mA at V_{CE} = 5 V, I_C = 500 mA at V_{CE} = 5 V, I_C = 1 A	 h_{FE} h_{FE} h_{FE}	 50 50 20	 - - -	 - 300 -	-
Collector Base Cutoff Current at V_{CB} = 125 V	I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current at V_{EB} = 5.6 V	I_{EBO}	-	-	100	nA
Collector Base Breakdown Voltage at I_C = 100 μA	$V_{(BR)CBO}$	180	-	-	V
Collector Emitter Breakdown Voltage at I_C = 10 mA	$V_{(BR)CEO}$	150	-	-	V
Emitter Base Breakdown Voltage at I_E = 100 μA	$V_{(BR)EBO}$	7	-	-	V
Collector Emitter Saturation Voltage at I_C = 500 mA, I_B = 50 mA at I_C = 2 A, I_B = 200 mA	$V_{CE(sat)}$	 -	 -	500 500	mV
Base Emitter Saturation Voltage at I_C = 500 mA, I_B = 50 mA	$V_{BE(sat)}$	-	-	1.1	V
Base Emitter On Voltage at I_C = 500 mA, V_{CE} = 5 V	$V_{BE(on)}$	-	-	1	V
Transition Frequency at V_{CE} = 20 V, I_C = 10 mA, f = 20 MHz	f_T	30	-	-	MHz
Collector Output Capacitance at V_{CB} = 10 V, f = 1 MHz	C_{ob}	-	-	20	pF

Electrical Characteristics Curves

Fig. 1 Output Characteristics Curve

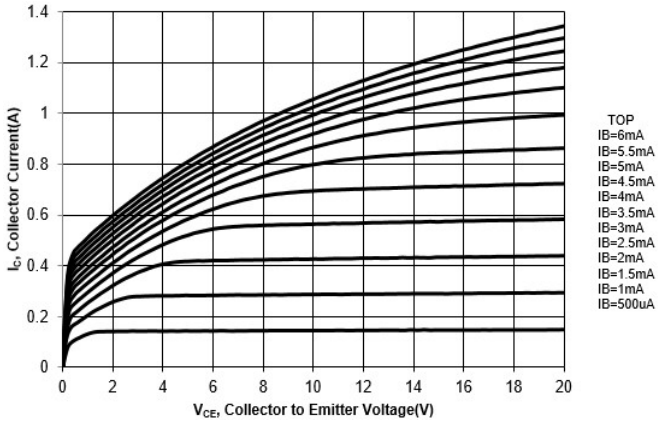


Fig. 2 Collector Current vs. Base to Emitter Voltage

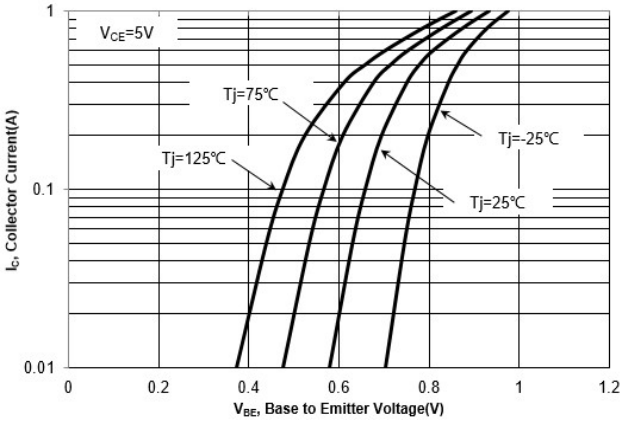


Fig. 3 h_{FE},DC Current Gain vs. Collector Current

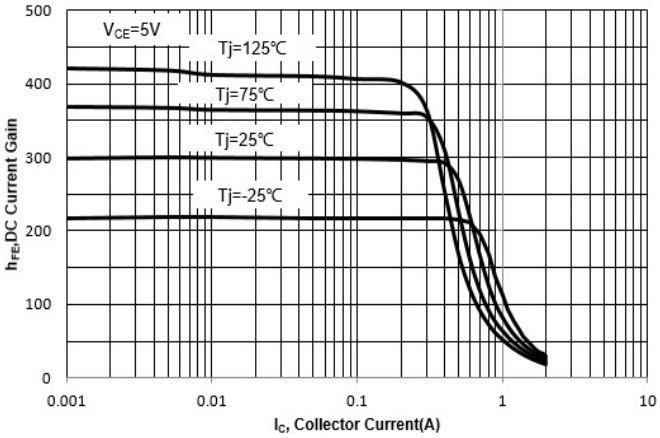
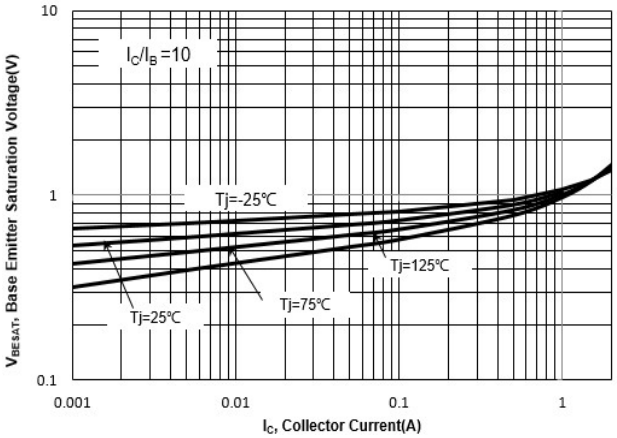


Fig. 4 V_{BESAT} vs. Collector Current



Electrical Characteristics Curves

Fig. 5 V_{CESAT} vs. Collector Current

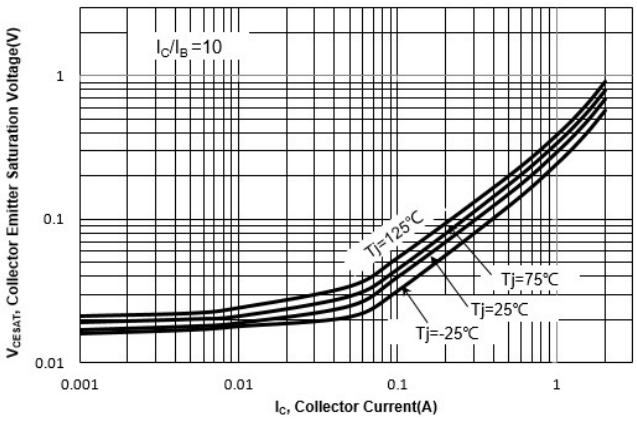


Fig. 6 Output Capacitance

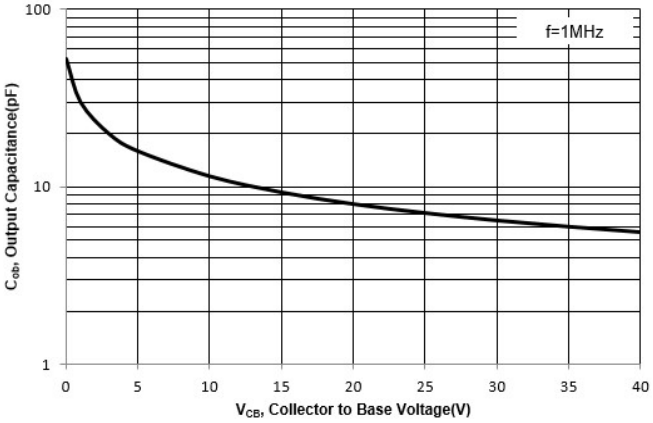
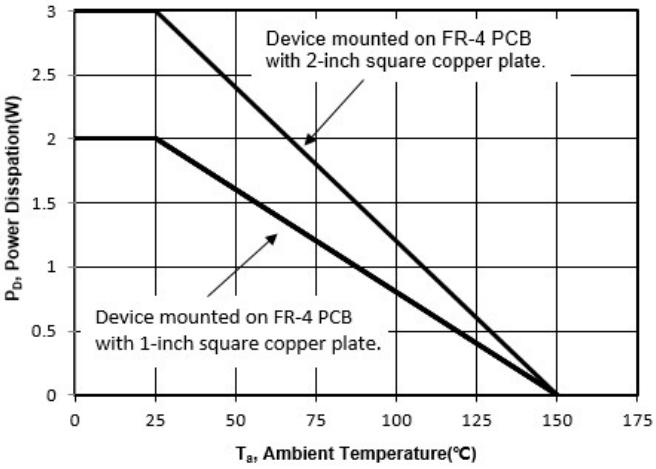
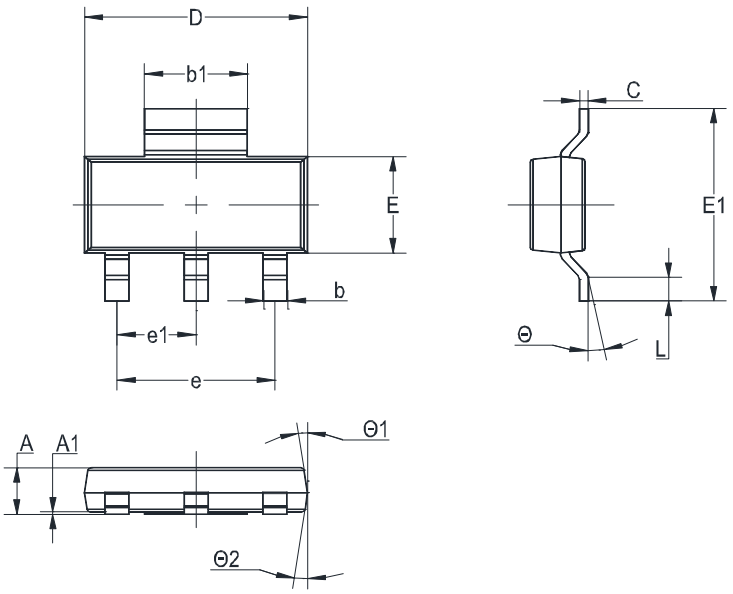


Fig. 7 Power Derating Curve



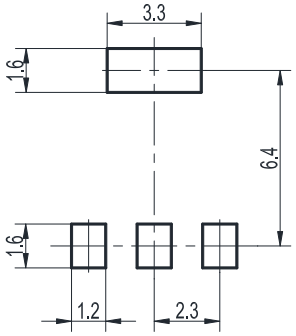
Package Outline (Dimensions in mm)

SOT-223



Unit	A	A1	b	b1	C	D	E	E1	e	e1	L	Θ	Θ1	Θ2
mm	1.8 1.5	0.1 MAX	0.8 0.6	3.1 2.9	0.32 0.22	6.7 6.3	3.7 3.3	7.3 6.7	4.6 TYP	2.3 TYP	1.1 0.7	10° 0°	7° 0°	7° 0°

Recommended Soldering Footprint



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