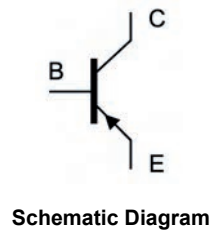
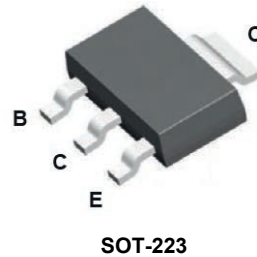


Features

- Low saturation voltage
- Silicon epitaxial planar power transistor

Applications

- Telephone switching
- High voltage switch



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-400	V
Collector Emitter Voltage	V_{CEO}	-400	V
Emitter Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-500	mA
Total Power Dissipation	P_{tot}	1.5	W
Max. Thermal Resistance from Junction to Ambient ¹	$R_{\theta JA}$	83.3	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

Note:

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

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}$	-400	-	-	V
Collector Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}$	-400	-	-	V
Emitter Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}$	-6	-	-	V
Collector Base Cutoff Current	I_{CBO}	$V_{CB}=-400\text{V}$	-	-	-0.1	μA
Emitter Base Cutoff Current	I_{EBO}	$V_{EB}=-4\text{V}$	-	-	-0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=-10\text{V}, I_C=-10\text{mA}$	80	-	300	-
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-10\text{mA}, I_B=-1\text{mA}$	-	-	-200	mV
		$I_C=-50\text{mA}, I_B=-5\text{mA}$	-	-	-500	mV
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=50\text{mA}, I_B=-5\text{mA}$	-	-	-1	V

Electrical Characteristic Curves

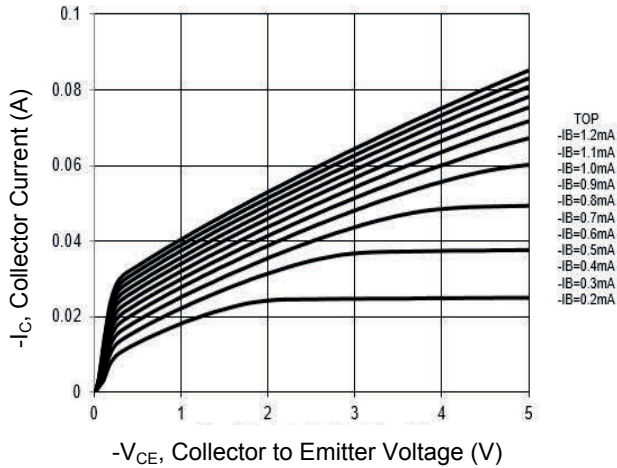


Figure 1. Output Characteristics Curve

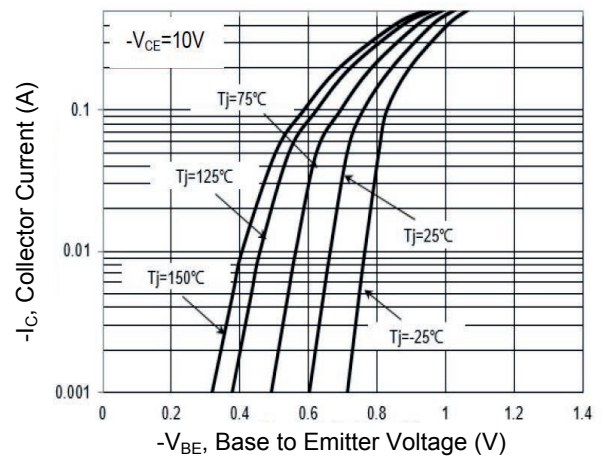


Figure 2. Collector Current vs. Base to Emitter Voltage

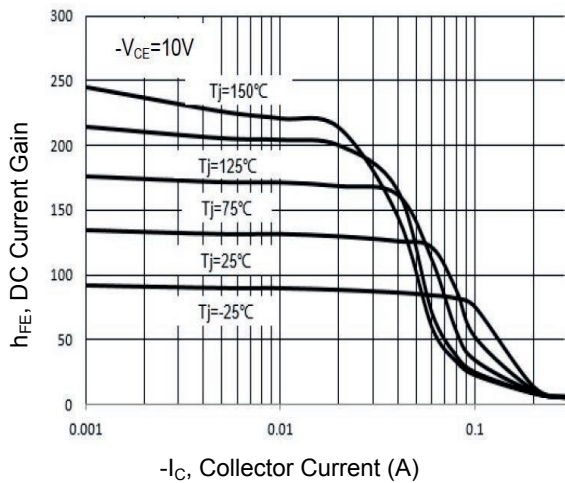


Figure 3. DC Current Gain vs. Collector Current

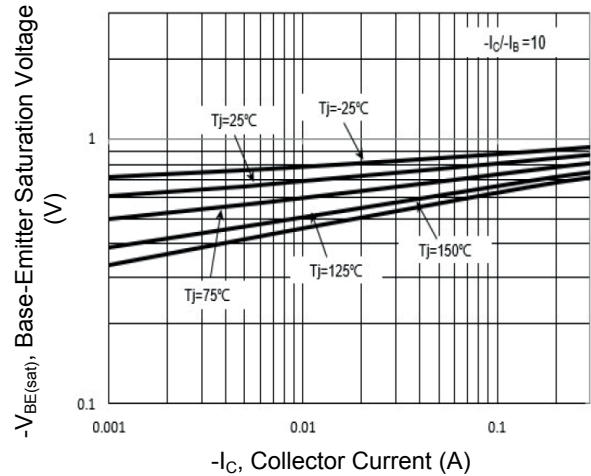


Figure 4. Base-Emitter Saturation Voltage vs. Collector Current

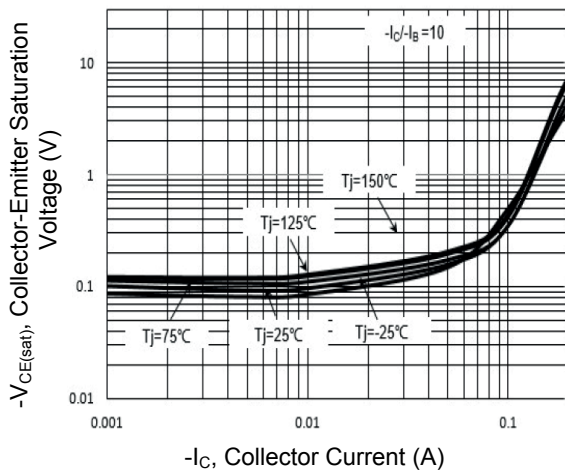


Figure 5. Collector-Emmitter Saturation Voltage vs. Collector Current

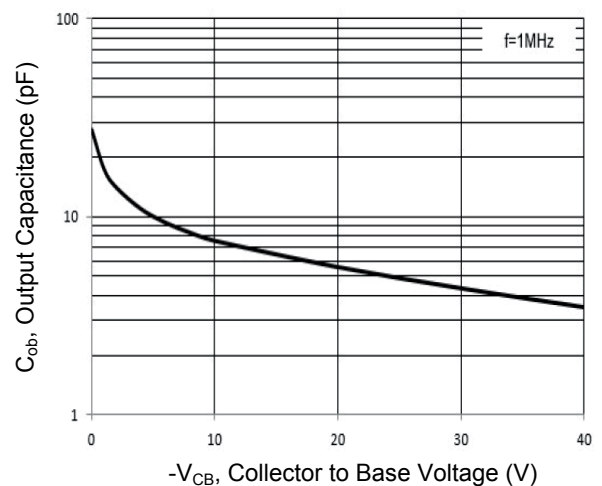


Figure 6. Output Capacitance

Electrical Characteristic Curves

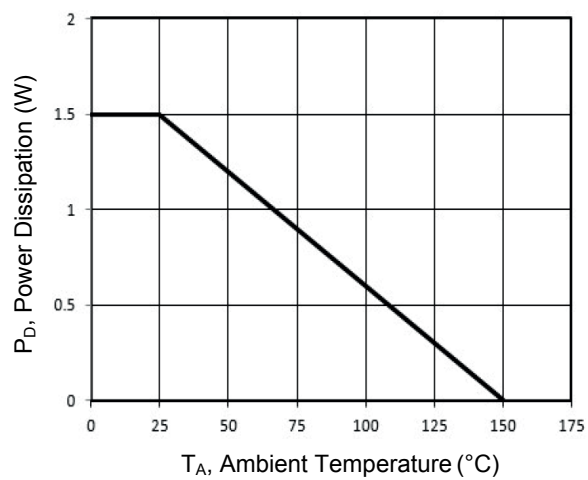
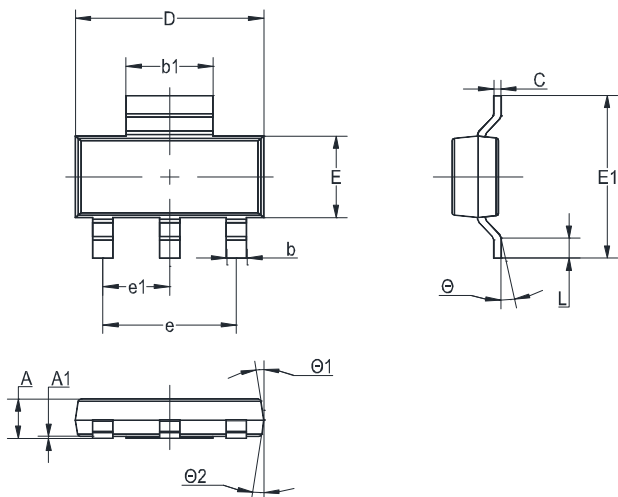


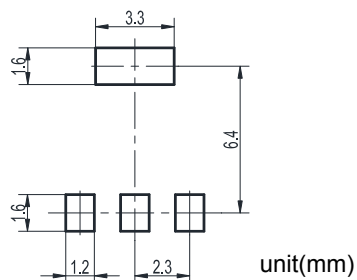
Figure 7. Power Derating Curve

Package Outline Dimensions (SOT-223)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.10 MAX		0.004 MAX	
b	0.60	0.80	0.024	0.031
b1	2.90	3.10	0.114	0.122
C	0.22	0.32	0.009	0.013
D	6.30	6.70	0.248	0.264
E	3.30	3.70	0.130	0.146
E1	6.70	7.30	0.264	0.287
e	4.60 TYP		0.181 TYP	
e1	2.30 TYP		0.091 TYP	
L	0.70	1.10	0.028	0.043
θ	0°	10°	0°	10°
θ1	0°	7°	0°	7°
θ2	0°	7°	0°	7°

Recommended Pad Layout



Ordering Information

Device	Package	Marking	Carrier	Quantity
GSPZTA94	SOT-223	PZTA94Q	Tape & Reel	3,000pcs / Reel