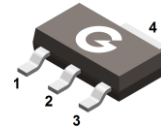
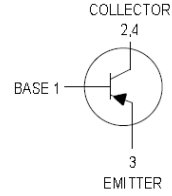


Features

- Low Collector-Emitter saturation voltage $V_{CE(sat)}$
- High collector current capability
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF



SOT-223

Mechanical Data

- Case: SOT-223
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TFZT954	SOT-223	4000 pcs / Tape & Reel	FZT954

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

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	-140	V
Collector-Emitter Breakdown Voltage	V_{CEO}	-100	V
Emitter-Base Breakdown Voltage	V_{EBO}	-7	V
Collector Current (Continuous)	I_C	-5	A
Collector Current (Peak)	I_{CM}	-10	A

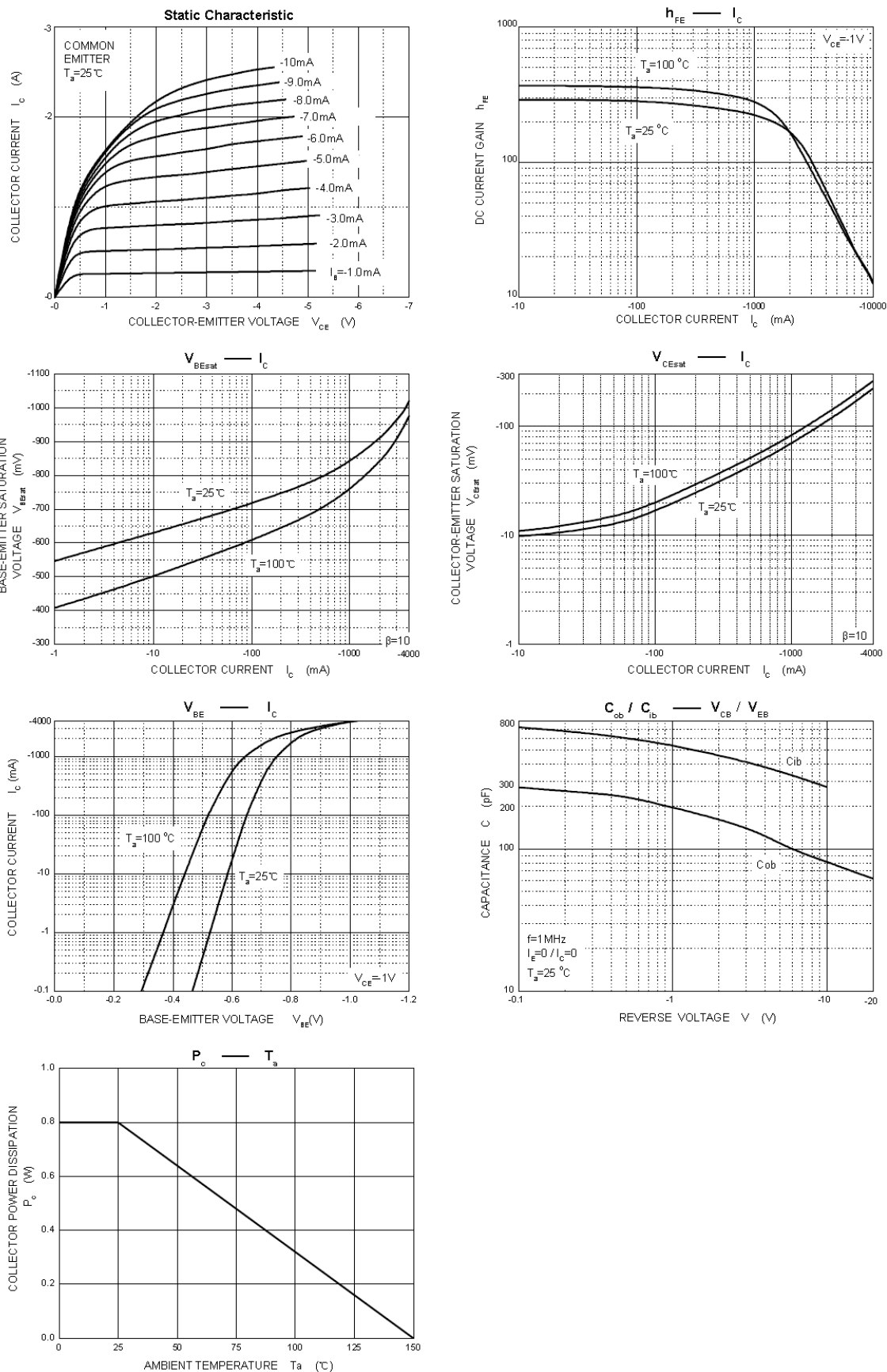
Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	0.8	W
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	156	$^\circ\text{C/W}$
Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

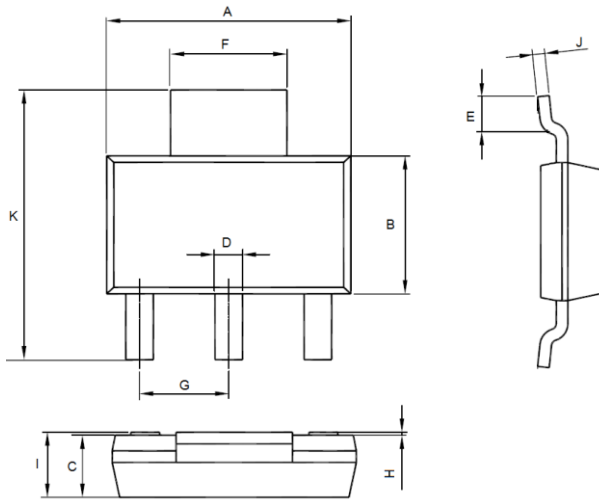
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}$, $I_E = 0$	-140	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}$, $I_B = 0$	-100	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}$, $I_C = 0$	-7	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -100\text{V}$, $I_E = 0$	-	-	-20	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -6\text{V}$, $I_C = 0$	-	-	-10	nA
DC Current Gain	h_{FE}	$V_{CE} = -1\text{V}$, $I_C = -10\text{mA}$	100	-	-	-
		$V_{CE} = -1\text{V}$, $I_C = -1\text{A}$	100	-	300	-
		$V_{CE} = -1\text{V}$, $I_C = -3\text{A}$	25	-	-	-
		$V_{CE} = -1\text{V}$, $I_C = -4\text{A}$	15	-	-	-
		$V_{CE} = -1\text{V}$, $I_C = -10\text{A}$	-	5	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}$, $I_B = -10\text{mA}$	-	-	-0.03	V
		$I_C = -1\text{A}$, $I_B = -100\text{mA}$	-	-	-0.09	V
		$I_C = -2\text{A}$, $I_B = -200\text{mA}$	-	-	-0.15	V
		$I_C = -4\text{A}$, $I_B = -400\text{mA}$	-	-	-0.34	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -4\text{A}$, $I_B = -400\text{mA}$	-	-	-1.1	V
Base-emitter Voltage	$V_{BE(on)}$	$I_C = -4\text{A}$, $V_{CE} = -1\text{V}$	-	-	-1.1	V
Transition Frequency	f_T	$V_{CE} = -10\text{V}$, $I_C = -500\text{mA}$ $f = 30\text{MHz}$	30	80	-	MHz
Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = I_C = 0$ $f = 1\text{MHz}$	-	70	-	pF

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)



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

