

GST955JXF

PNP Bipolar Transistor

Product Description

It is a PNP bipolar junction transistor with V_{CE0} -140V and I_C -4A.

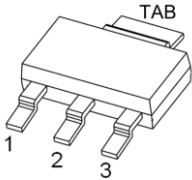
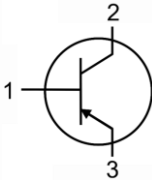
Features

- Collector-Emitter Voltage $V_{CE0} = -140V$
- Collector Current -4A
- Low Saturation Voltage

Mechanical Data

- SOT-223 Package
- RoHS Compliant and Halogen Free

Packages & Pin Assignments

SOT-223			Equivalent Circuit		
					
Pin	Symbol	Description	Pin	Symbol	Description
1	B	Base	3	E	Emitter
2	C	Collector	TAB	C	Collector

Ordering and Marking Information

Ordering Information			
Part Number	Package	Marking Code	Quantity/Reel
GST955JXF	SOT-223	ZT955	2,500 PCS
GST955 1 2			
- Product Code: GST955 - Package Code: 1 is JX for SOT-223 - Green Level: F for RoHS Compliant and Halogen Free			
Marking Information			
□ □ □ □ - Product Code: □□□□ is ZT955			

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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	-180	V
V _{CE0}	Collector-Emitter Voltage	-140	V
V _{EB0}	Emitter-Base Voltage	-6	V
I _C	Collector Current	-4	A
I _{CM}	Peak Collector Current	-10	
P _D	Power Dissipation T _A =25°C	0.8	W
R _{θJA}	Thermal Resistance, Junction to Ambient ²	156	°C/W
T _J	Junction Temperature Range	-55 to +150	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C

NOTE:

1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.
2. Device mounted on an FR4 PCB.

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

Symbol	Description	Conditions	Min	Max	Unit
BV _{CBO}	Collector-Base Breakdown Voltage	I _C =-100μA, I _E =0	-180		V
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C =-10mA, I _B =0A	-140		V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E =-100μA, I _C =0A	-6		V
I _{CBO}	Collector-Base Cut-Off Current	V _{CB} =-150V, I _E =0A		-50	nA
I _{EBO}	Emitter-Base Cut-Off Current	V _{EB} =-6V, I _C =0A		-10	nA
h _{FE}	DC Current Gain	V _{CE} =-5V, I _C =-10mA	100		
		V _{CE} =-5V, I _C =-1A	100	300	
		V _{CE} =-5V, I _C =-3A	75		
V _{CE(SAT)}	Collector-Emitter Saturation Voltage	I _C =-100mA, I _B =-5mA		-60	mV
		I _C =-500mA, I _B =-50mA		-120	
		I _C =-1A, I _B =-100mA		-150	
		I _C =-3A, I _B =-300mA		-370	
V _{BE(SAT)}	Base-Emitter Saturation Voltage	I _C =-3A, I _B =-300mA		-1.11	V
V _{BE(ON)}	Base-Emitter Turn-On Voltage	V _{CE} =-5V, I _C =-3A		-0.95	V
f _T	Transition Frequency	V _{CE} =-10V, I _C =-100mA f= 50MHz	70 Typical		MHz
C _{ob}	Collector Capacitance	V _{CB} =-20V, I _E =0A, f=1MHz	40 Typical		pF
t _{on}	Switching Time	V _{CC} =-50V, I _C =-1A, I _{B1} = I _{B2} =-100mA	68 Typical		ns
t _{off}			1030 Typical		

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

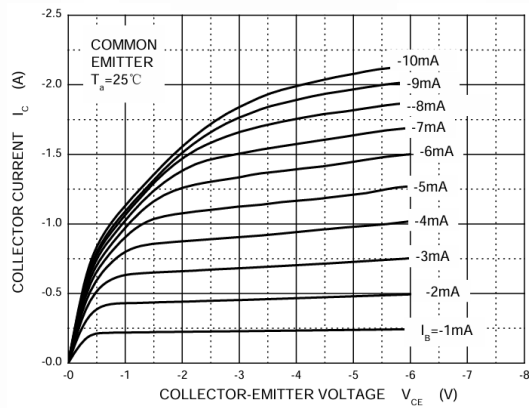


Figure 1. I_c vs. V_{CE}

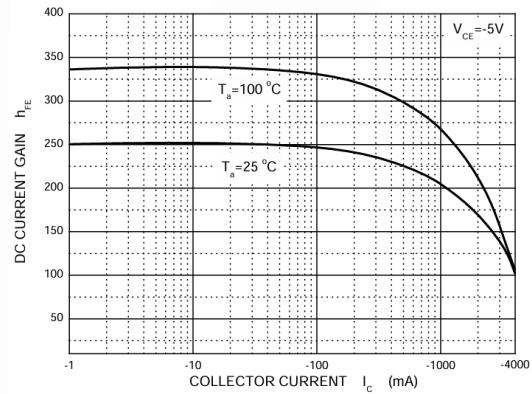


Figure 2. h_{FE} vs. I_c

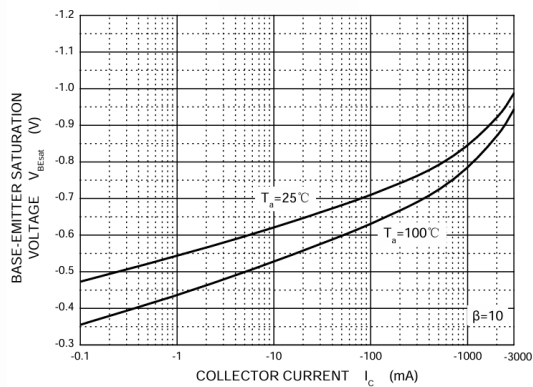


Figure 3. $V_{BE(SAT)}$ vs. I_c

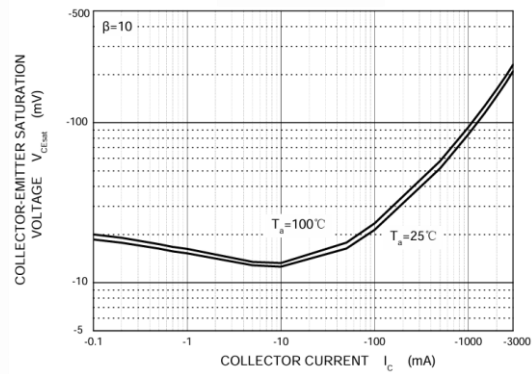


Figure 4. $V_{CE(SAT)}$ vs. I_c

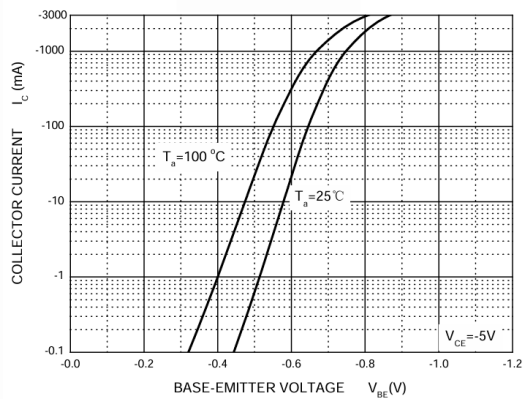


Figure 5. V_{BE} vs. I_c

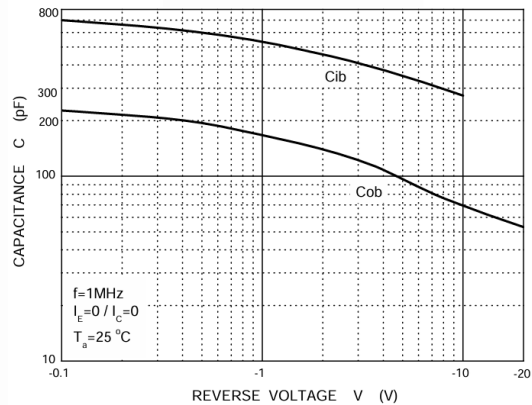
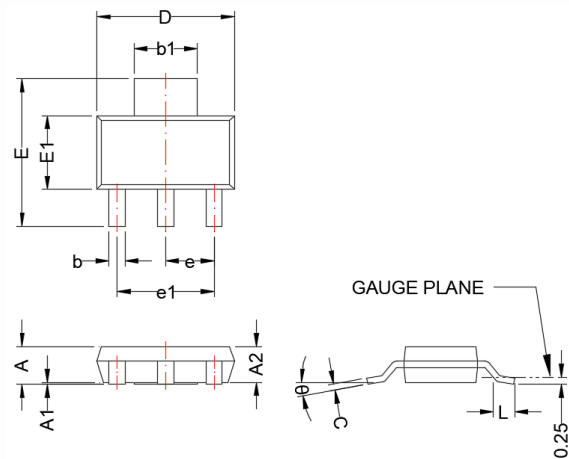


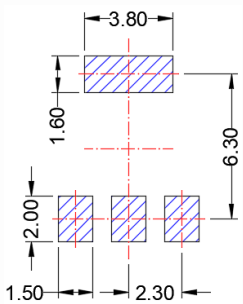
Figure 6. C_{ob} / C_{ib} vs. V_{CB} / V_{EB}

SOT-223

Package Dimension



Recommended Land Pattern



Unit:mm

Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	1.50	1.80	0.059	0.071
A1	0.00	0.12	0.000	0.005
A2	1.45	1.75	0.057	0.069
b	0.60	0.84	0.024	0.033
b1	2.90	3.10	0.114	0.122
c	0.23	0.35	0.009	0.014
D	6.20	6.70	0.244	0.264
E	6.70	7.30	0.264	0.287
E1	3.30	3.70	0.130	0.146
e	2.30 BSC		0.091 BSC	
e1	4.60 BSC		0.181 BSC	
L	0.75	---	0.030	---
θ	0°	10°	0°	10°

NOTE:
Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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