CZT955

SURFACE MOUNT SILICON HIGH CURRENT PNP TRANSISTOR



SOT-223 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CZT955 is a silicon high current PNP transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high voltage and high current amplifier applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Collector-Base Voltage	V_{CBO}	180	V
Collector-Emitter Voltage	V_{CEO}	140	V
Emitter-Base Voltage	V_{EBO}	7.0	V
Continuous Collector Current	I_C	4.0	A
Peak Collector Current	I_{CM}	10	A
Power Dissipation (Note 1)	P_D	3.0	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	41.7	°C/W

Note 1: FR-4 Epoxy PC Board with copper mounting pad area of 4in^2 (minimum).

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

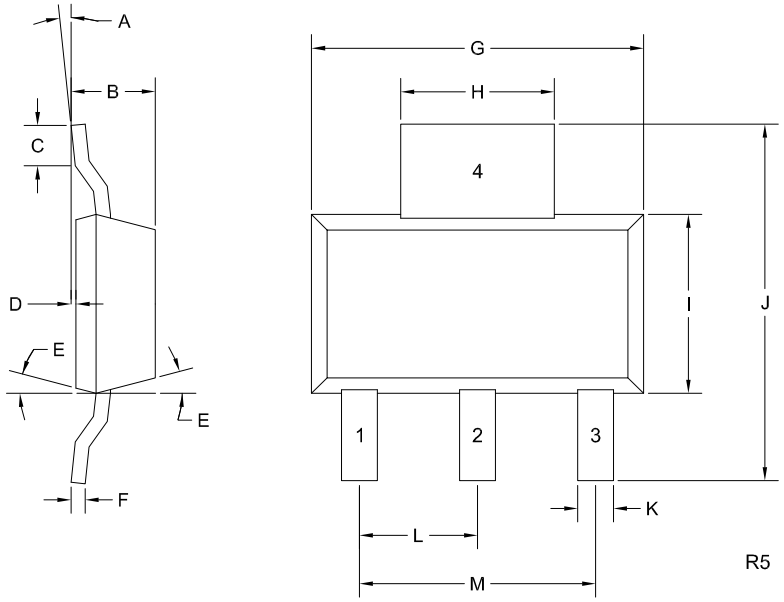
SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=150V			20	nA
I_{CBO}	V_{CB}=150V, T_A=100°C			0.5	µA
I_{CER}	V_{CE}=150V, R_{BE}≤1.0kΩ			20	nA
I_{EBO}	V_{EB}=6.0V			10	nA
BV_{CBO}	I_C=100µA	180	200		V
BV_{CER}	I_C=1.0µA, R_{BE}≤1.0kΩ	180	200		V
BV_{CEO}	I_C=10mA	140	160		V
BV_{EBO}	I_E=100µA	7.0	8.0		V
$V_{CE(SAT)}$	I_C=100mA, I_B=5.0mA		40	60	mV
$V_{CE(SAT)}$	I_C=0.5A, I_B=50mA		55	80	mV
$V_{CE(SAT)}$	I_C=1.0A, I_B=100mA		85	120	mV
$V_{CE(SAT)}$	I_C=3.0A, I_B=300mA		210	360	mV
$V_{BE(SAT)}$	I_C=3.0A, I_B=300mA		0.96	1.04	V
$V_{BE(ON)}$	V_{CE}=5.0V, I_C=3.0A		830	930	mV
h_{FE}	V_{CE}=5.0V, I_C=10mA	100	250		
h_{FE}	V_{CE}=5.0V, I_C=1.0A	100	220	300	
h_{FE}	V_{CE}=5.0V, I_C=3.0A	35			
h_{FE}	V_{CE}=5.0V, I_C=10A		5.0		
f_T	V_{CE}=10V, I_C=100mA, f=50MHz		200		MHz
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		33		pF
t_{on}	V_{CC}=50V, I_C=1.0A, I_{B1}=I_{B2}=0.1A		25		ns
t_{off}	V_{CC}=50V, I_C=1.0A, I_{B1}=I_{B2}=0.1A		410		ns

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SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:
1) Base
2) Collector
3) Emitter
4) Collector

MARKING:
FULL PART NUMBER

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0°	10°	0°	10°
B	0.059	0.071	1.50	1.80
C	0.018	---	0.45	---
D	0.000	0.004	0.00	0.10
E	10°		10°	
F	0.009	0.014	0.23	0.35
G	0.248	0.270	6.30	6.85
H	0.114	0.122	2.90	3.10
I	0.130	0.146	3.30	3.70
J	0.264	0.287	6.70	7.30
K	0.024	0.033	0.60	0.85
L	0.091		2.30	
M	0.181		4.60	

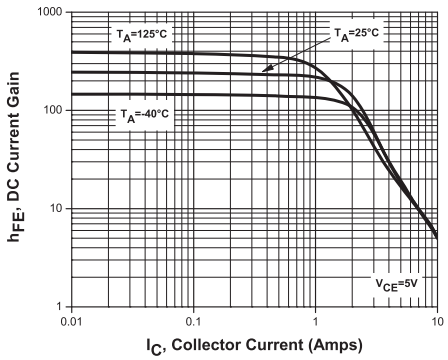
SOT-223 (REV: R5)

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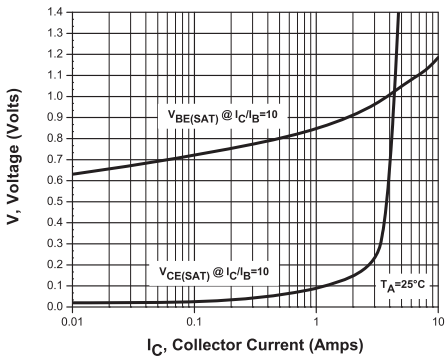
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TYPICAL ELECTRICAL CHARACTERISTICS

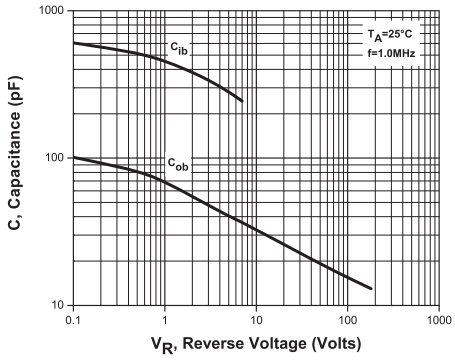
DC Current Gain



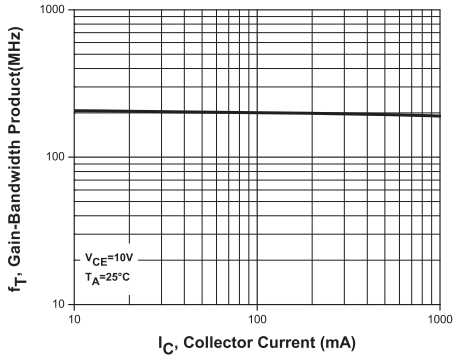
"ON" Voltage



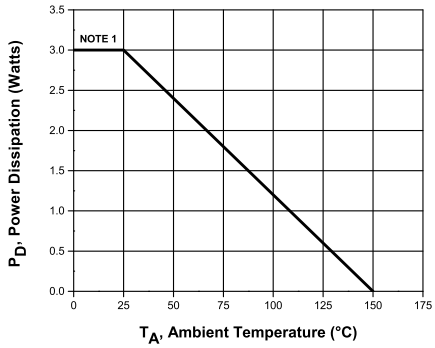
Capacitance



Current Gain-Bandwidth Product



Power Derating



R4 (10-May 2019)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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