PZTA96ST1G

High Voltage Transistor

PNP Silicon

Features

- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector−Emitter Voltage	V_{CEO}	−450	Vdc
Collector−Base Voltage	V_{CBO}	−450	Vdc
Emitter−Base Voltage	V_{EBO}	−5.0	Vdc
Collector Current	I_C	−500	mAdc
Total Power Dissipation Up to T_A = 25°C (Note 1)	P_D	1.5	W
Storage Temperature Range	T_{stg}	−65 to +150	°C
Junction Temperature	T_J	150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. Device mounted on a glass epoxy printed circuit board 1.575 in. x 1.575 in. x 0.059 in.; mounting pad for the collector lead min. 0.93 in^2.

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction−to−Ambient (Note 2)	$R_{\theta JA}$	83.3	°C

2. Device mounted on a glass epoxy printed circuit board 1.575 in. x 1.575 in. x 0.059 in.; mounting pad for the collector lead min. 0.93 in^2.

ELECTRICAL CHARACTERISTICS (Note 3)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector−Emitter Breakdown Voltage (I_C = −1.0 mAdc, I_B = 0)	$V_{(BR)CEO}$	−450	−	Vdc
Collector−Emitter Breakdown Voltage (I_C = −100 μAdc, I_E = 0)	$V_{(BR)CBO}$	−450	−	Vdc
Emitter−Base Breakdown Voltage (I_E = −10 μAdc, I_C = 0)	$V_{(BR)EBO}$	−5.0	−	Vdc
Collector−Base Cutoff Current (V_{CB} = −400 Vdc, I_E = 0)	I_{CBO}	−	−0.1	μAdc
Emitter−Base Cutoff Current (V_{BE} = −4.0 Vdc, I_C = 0)	I_{EBO}	−	−0.1	μAdc
ON CHARACTERISTICS				
DC Current Gain (Note 4) (I_C = −10 mAdc, V_{CE} = −10 Vdc)	h_{FE}	50	150	−
Saturation Voltages (I_C = −20 mAdc, I_B = −2.0 mAdc)	$V_{CE(sat)}$	−	−0.6	Vdc
(I_C = −20 mAdc, I_B = −2.0 mAdc)	$V_{BE(sat)}$	−	−1.0	

3. T_A = 25°C unless otherwise noted.
4. Pulse Test: Pulse Width ≤ 300 μs; Duty Cycle = 2.0%.

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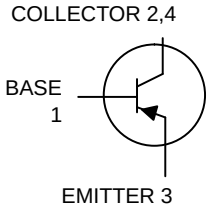
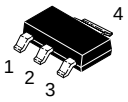
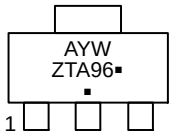




SOT−223 (TO−261)
CASE 318E
STYLE 1

MARKING DIAGRAM



A = Assembly Location
Y = Year
W = Work Week
▪ = Pb−Free Package

(Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping†
PZTA96ST1G	SOT−223 (Pb−Free)	1000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

TYPICAL CHARACTERISTICS

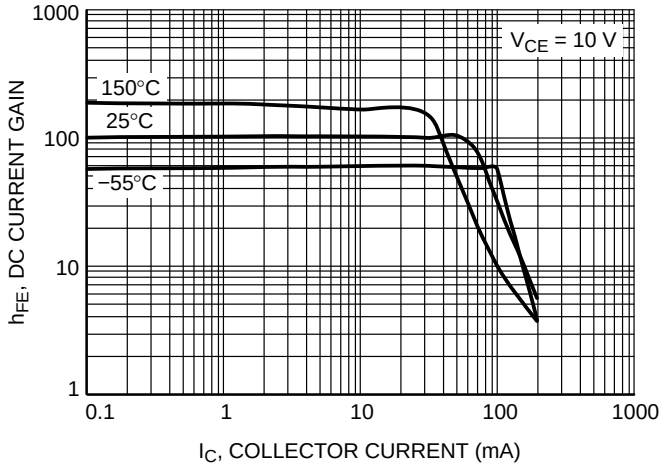


Figure 1. DC Current Gain

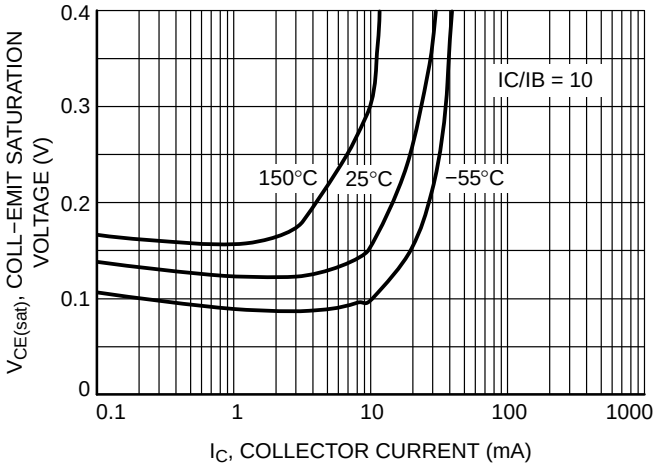


Figure 2. Collector−Emitter Saturation Voltage

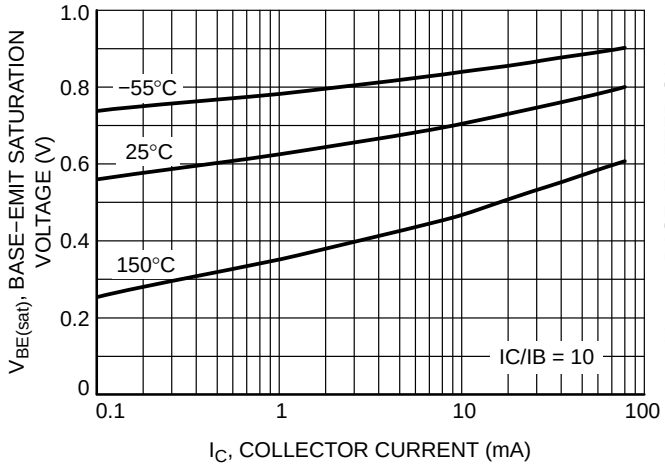


Figure 3. Base−Emitter Saturation Voltage

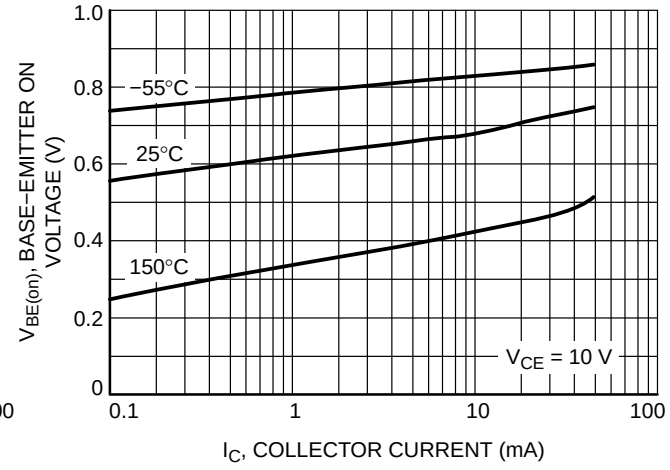


Figure 4. Base−Emitter “On” Voltage

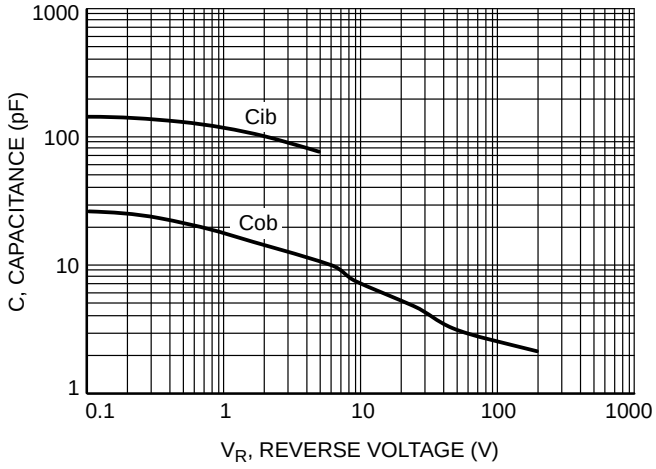


Figure 5. Capacitances

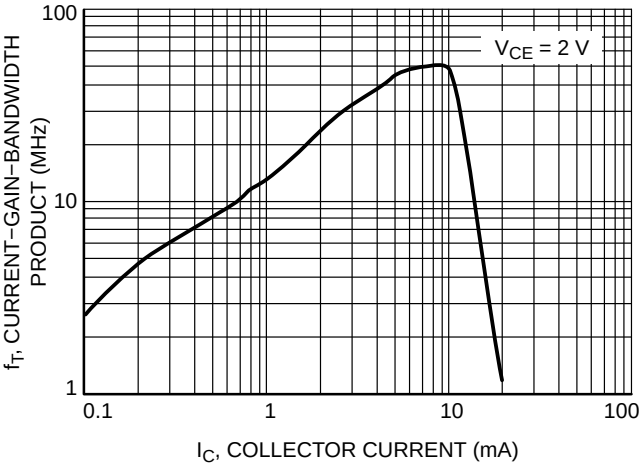
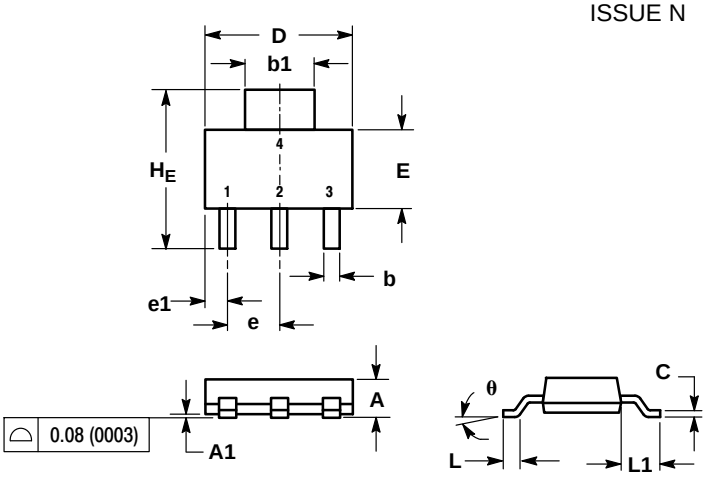


Figure 6. Current−Gain−Bandwidth Product

PZTA96ST1G

PACKAGE DIMENSIONS

SOT−223 (TO−261)
CASE 318E−04
ISSUE N

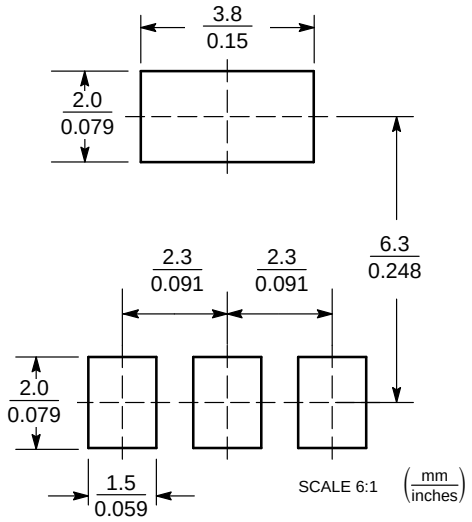


NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: INCH.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	1.50	1.63	1.75	0.060	0.064	0.068
A1	0.02	0.06	0.10	0.001	0.002	0.004
b	0.60	0.75	0.89	0.024	0.030	0.035
b1	2.90	3.06	3.20	0.115	0.121	0.126
c	0.24	0.29	0.35	0.009	0.012	0.014
D	6.30	6.50	6.70	0.249	0.256	0.263
E	3.30	3.50	3.70	0.130	0.138	0.145
e	2.20	2.30	2.40	0.087	0.091	0.094
e1	0.85	0.94	1.05	0.033	0.037	0.041
L	0.20	−−−	−−−	0.008	−−−	−−−
L1	1.50	1.75	2.00	0.060	0.069	0.078
H_E	6.70	7.00	7.30	0.264	0.276	0.287
θ	0°	–	10°	0°	–	10°

STYLE 1:
PIN 1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR

SOLDERING FOOTPRINT*



*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
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