BSP16T1G

High Voltage Transistors

PNP Silicon

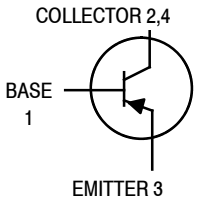
Features

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

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PNP SILICON
HIGH VOLTAGE TRANSISTOR
SURFACE MOUNT



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	-300	Vdc
Collector-Base Voltage	V_{CBO}	-350	Vdc
Emitter-Base Voltage	V_{EBO}	-6.0	Vdc
Collector Current	I_C	-100	mAdc
Total Device Dissipation @ T_A = 25°C (Note 1)	P_D	1.5	W
Storage Temperature Range	P_D	-65 to +150	°C
Junction Temperature	T_J	150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	83.3	°C/W

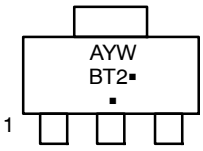
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

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 sq. in.

MARKING DIAGRAM



TO-223
CASE 318E
STYLE 1



A = Assembly Location
Y = Year
W = Work Week
BT2 =Device Code
▪ = Pb-Free Package
(Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping†
BSP16T1G	TO-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.

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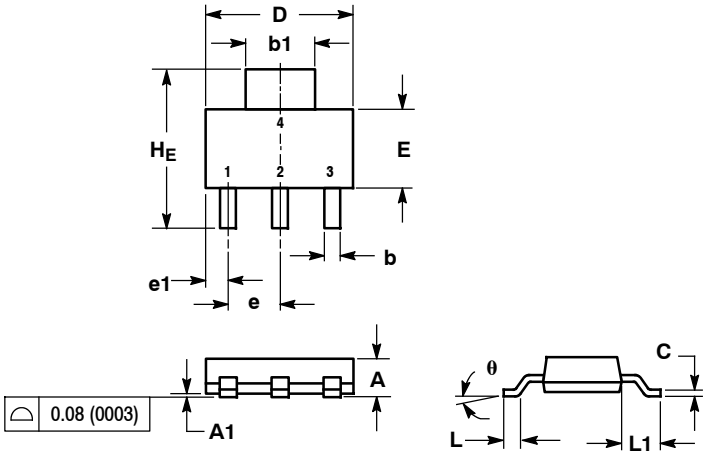
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector - Emitter Breakdown Voltage (I_C = -50 mAdc, I_B = 0, L = 25 mH)	$V_{(BR)CEO}$	-300	-	Vdc
Collector - Base Breakdown Voltage (I_C = -100 μAdc, I_E = 0)	$V_{(BR)CBO}$	-300	-	Vdc
Collector-Emitter Cutoff Current (V_{CE} = -250 Vdc, I_B = 0)	I_{CES}	-	-50	μAdc
Collector-Base Cutoff Current (V_{CB} = -280 Vdc, I_E = 0)	I_{CBO}	-	-1.0	μAdc
Emitter-Base Cutoff Current (V_{EB} = -6.0 Vdc, I_C = 0)	I_{EBO}	-	-20	μAdc
ON CHARACTERISTICS				
DC Current Gain (V_{CE} = - 10 Vdc, I_C = -50 mAdc)	h_{FE}	30	120	-
Collector-Emitter Saturation Voltage (I_C = - 50 mAdc, I_B = - 5.0 mAdc)	$V_{CE(sat)}$	-	- 2.0	Vdc
DYNAMIC CHARACTERISTICS				
Current Gain - Bandwidth Product (V_{CE} = - 10 Vdc, I_C = -10 mAdc, f = 30 MHz)	f_T	15	-	MHz
Collector-Base Capacitance (V_{CB} = - 10 Vdc, I_E = 0, f = 1.0 MHz)	C_{obo}	-	15	pF

BSP16T1G

PACKAGE DIMENSIONS

SOT−223 (TO−261)
CASE 318E−04
ISSUE N

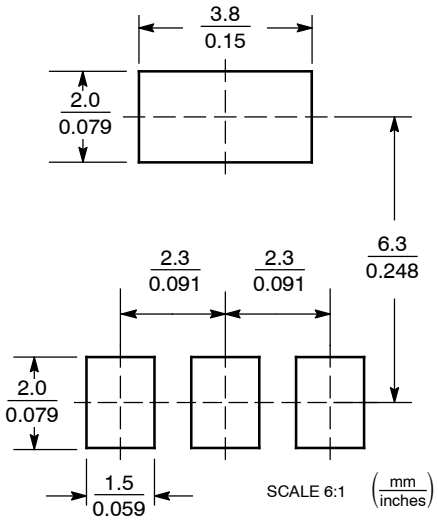


NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: INCH.

	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.

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