BSP16T1

Preferred Device

High Voltage Transistors

PNP Silicon

Features

- Pb−Free Package is Available

ON Semiconductor®

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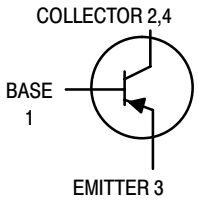
PNP SILICON
HIGH VOLTAGE TRANSISTOR
SURFACE MOUNT



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	−1000	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

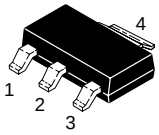
Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

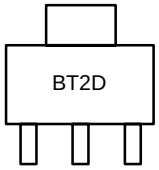
Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction−to−Ambient	$R_{\theta JA}$	83.3	°C/W

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



BT2 = Specific Device Code
D = Date

ORDERING INFORMATION

Device	Package	Shipping†
BSP16T1	TO−223	1000/Tape & Reel
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.

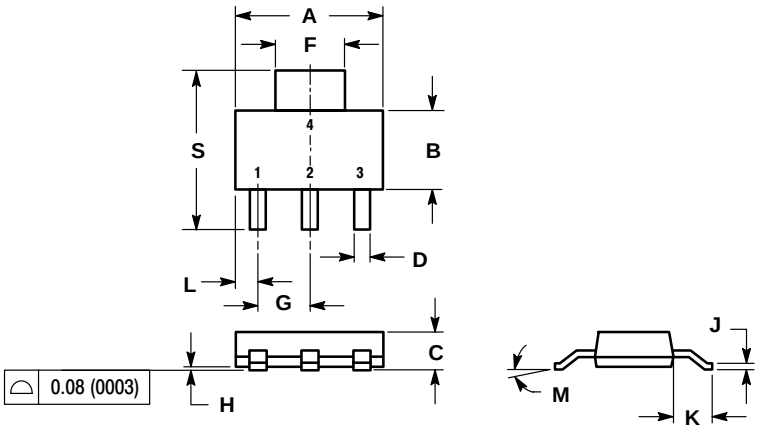
Preferred devices are recommended choices for future use and best overall value.

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

PACKAGE DIMENSIONS

TO−223 (TO−261)
CASE 318E−04
ISSUE K

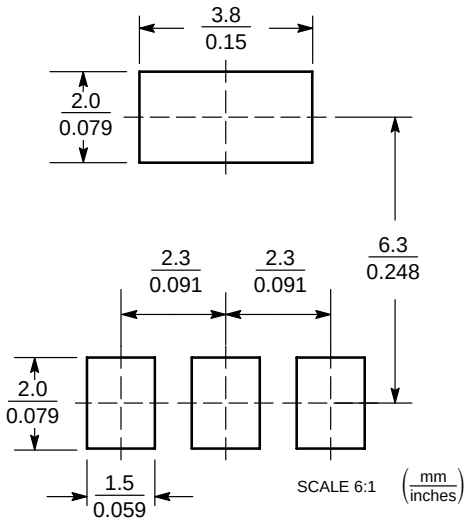


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.249	0.263	6.30	6.70
B	0.130	0.145	3.30	3.70
C	0.060	0.068	1.50	1.75
D	0.024	0.035	0.60	0.89
F	0.115	0.126	2.90	3.20
G	0.087	0.094	2.20	2.40
H	0.0008	0.0040	0.020	0.100
J	0.009	0.014	0.24	0.35
K	0.060	0.078	1.50	2.00
L	0.033	0.041	0.85	1.05
M	0 °	10 °	0 °	10 °
S	0.264	0.287	6.70	7.30

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
Phone: 303−675−2175 or 800−344−3860 Toll Free USA/Canada
Fax: 303−675−2176 or 800−344−3867 Toll Free USA/Canada
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BSP16T1/D

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