

2

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	mA _{dc}
Base Current	I_B	- 500	mA _{dc}
Total Power Dissipation, $T_A = 25^\circ\text{C}^*$	P_D^*	1.5	Watts
Storage Temperature Range	T_{stg}	- 65 to +150	$^\circ\text{C}$
Junction Temperature	T_J	150	$^\circ\text{C}$

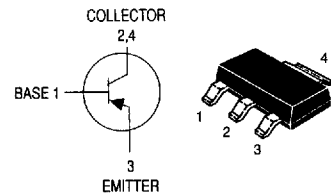
DEVICE MARKING

BT2

THERMAL CHARACTERISTICS

Thermal Resistance from Junction to Ambient*	$R_{\theta JA}$	83.3	$^\circ\text{C/W}$
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BSP16T1★

CASE 318E-04, STYLE 1
(TO-261AA)SOT-223 PACKAGE
PNP SILICON
HIGH VOLTAGE TRANSISTOR
SURFACE MOUNT*This is a Motorola
designated preferred device.ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C = -50$ mA _{dc} , $I_B = 0$, $t = 25$ mH)	$V_{(BR)CEO}$	- 300	—	Vdc
Collector-Base Breakdown Voltage ($I_C = -100$ μ A _{dc} , $I_E = 0$)	$V_{(BR)CBO}$	- 300	—	Vdc
Collector-Emitter Cutoff Current ($V_{CE} = -250$ Vdc, $I_B = 0$)	I_{CES}	—	- 50	μ A _{dc}
Collector-Base Cutoff Current ($V_{CB} = -280$ Vdc, $I_E = 0$)	I_{CBO}	—	- 1.0	μ A _{dc}
Emitter-Base Cutoff Current ($V_{EB} = -6.0$ Vdc, $I_C = 0$)	I_{EBO}	—	- 20	μ A _{dc}

ON CHARACTERISTICS

DC Current Gain ($V_{CE} = -10$ Vdc, $I_C = -50$ mA _{dc})	h_{FE}	30	120	—
Collector-Emitter Saturation Voltage ($I_C = -50$ mA _{dc} , $I_B = -5.0$ mA _{dc})	$V_{CE(sat)}$	—	- 2.0	Vdc

DYNAMIC CHARACTERISTICS

Current-Gain — Bandwidth Product ($V_{CE} = -10$ Vdc, $I_C = -10$ mA _{dc} , $f = 30$ MHz)	f_T	15	—	MHz
Collector-Base Capacitance ($V_{CB} = -10$ Vdc, $I_E = 0$, $f = 1.0$ MHz)	C_{obo}	—	15	pF

* 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 in²