

# PNP Darlington Transistor BC516

### **Features**

- This Device is Designed for Applications Reguiring Extremely High Current Gain at Currents to 1 A.
- This is a Pb-Free Device

### **ABSOLUTE MAXIMUM RATINGS**

(Values are at T<sub>A</sub> = 25°C unless otherwise noted.)

Symbol	Parameter	Value	Unit	
V <sub>CEO</sub>	Collector–Emitter Voltage –30		V	
$V_{CBO}$	Collector-Base Voltage	-40	V	
V <sub>EBO</sub>	Emitter-Base Voltage	-10	V	
I <sub>C</sub>	I <sub>C</sub> Collector Current–Continuous		Α	
$T_J, T_{STG}$	Junction and Storage Junction Temperature Range	-55 to +150	°C	

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

# THERMAL CHARACTERISTICS (Note1)

(Values are at  $T_A = 25$ °C unless otherwise noted.)

Symbol	Parameter	Max.	Unit
$P_{D}$	Total Device Dissipation, T <sub>A</sub> = 25°C	625	mW
$R_{ heta JA}$	Thermal Resistance, Junction		•

°Base Breakdown Voltage

		$I_E = -10 \mu A, I_C = 0$	-10	ı	ı	V
I <sub>CBO</sub>	Collector Cut-Off Current	$V_{CB} = -30 \text{ V}, I_{E} = 0$	_	_	-100	nA
h <sub>FE</sub>	DC Current Gain	$I_C = -20 \text{ mA}, V_{CE} = -2 \text{ V}$	30,000	-	-	
V <sub>CE</sub> (sat)	Collector–Emitter Saturation Voltage	$I_C = -100 \text{ mA}, I_B = -0.1 \text{ mA}$	_	-	-1	V
V <sub>BE</sub> (on)	Base-Emitter On Voltage	$I_C = -10 \text{ mA}, V_{CE} = -5 \text{ V}$	_	-	-1.4	VBE

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