BC516_L34Z Datasheet

DiGi Electronics Part Number	BC516_L34Z-DG
Manufacturer	onsemi
Manufacturer Product Number	BC516_L34Z
Description	TRANS PNP DARL 30V 1A TO92-3
Detailed Description	Bipolar (BJT) Transistor PNP - Darlington 30 V 1 A 200MHz 625 mW Through Hole TO-92-3

https://www.DiGi-Electronics.com

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Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
BC516_L34Z	onsemi
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
PNP - Darlington	1 A
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
30 V	1V @ 100µA, 100mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
100nA (ICBO)	30000 @ 20mA, 2V
Power - Max:	Frequency - Transition:
625 mW	200MHz
Operating Temperature:	Mounting Type:
-55°C ~ 150°C (TJ)	Through Hole
Package / Case:	Supplier Device Package:
TO-226-3, TO-92-3 (TO-226AA)	TO-92-3
Base Product Number:	
BC516	

Environmental & Export classification

Moisture Sensitivity Level (MSL):	REACH Status:
1 (Unlimited)	REACH Unaffected
ECCN:	HTSUS:
EAR99	8541.21.0075

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DATA SHEET
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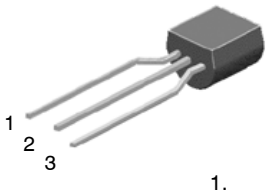
PNP Darlington Transistor

BC516



1. Collector
2. Base
3. Emitter

TO−92−3
CASE 135AR

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_A = 25°C unless otherwise noted.)

Symbol	Parameter	Value	Unit
V_{CEO}	Collector−Emitter Voltage	−30	V
V_{CBO}	Collector−Base Voltage	−40	V
V_{EBO}	Emitter−Base Voltage	−10	V
I_C	Collector Current−Continuous	−1	A
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.

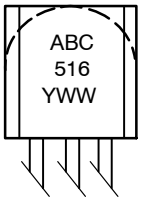
THERMAL CHARACTERISTICS (Note1)

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

Symbol	Parameter	Max.	Unit
P_D	Total Device Dissipation, T_A = 25°C	625	mW
$R_{\theta JA}$	Thermal Resistance, Junction−to−Ambient	200	°C/W
$R_{\theta JC}$	Thermal Resistance, Junction−to−Case	83.3	°C/W

1. PCB size: FR−4, 76 mm x 114 mm x 1.57 mm (3.0 inch x 4.5 inch x 0.062 inch) with minimum land pattern size.

MARKING DIAGRAM



A = Assembly Location
BC516 = Specific Device Code
Y = Year
WW = Work Week

ORDERING INFORMATION

Device	Package	Shipping†
BC516−D27Z	TO−92 3L	2000 / 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.

ELECTRICAL CHARACTERISTICS (Note 2)

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

Symbol	Parameter	Conditions	Min.	Typ,	Max.	Unit
V_{CEO}	Collector−Emitter Breakdown Voltage	I_C = −2 mA, I_B = 0	−30	−	−	V
V_{CBO}	Emitter−Base Breakdown Voltage	I_C = −100 μA, I_E = 0	−40	−	−	V
V_{EBO}	Emitter−Base Breakdown Voltage	I_E = −10 μA, I_C = 0	−10	−	−	V
I_{CBO}	Collector Cut−Off Current	V_{CB} = −30 V, I_E = 0	−	−	−100	nA
h_{FE}	DC Current Gain	I_C = −20 mA, V_{CE} = −2 V	30,000	−	−	
V_{CE}(sat)	Collector−Emitter Saturation Voltage	I_C = −100 mA, I_B = −0.1 mA	−	−	−1	V
V_{BE}(on)	Base−Emitter On Voltage	I_C = −10 mA, V_{CE} = −5 V	−	−	−1.4	V
f_T	Current Gain − Bandwidth Product (Note 3)	I_C = −10 mA, V_{CE} = −5 V, f = 100 MHz	−	200	−	MHz

2. Pulse Test: Pulse Width ≤ 0. 2%.
3. $f_T = |h_{fe}| \cdot f_{test}$

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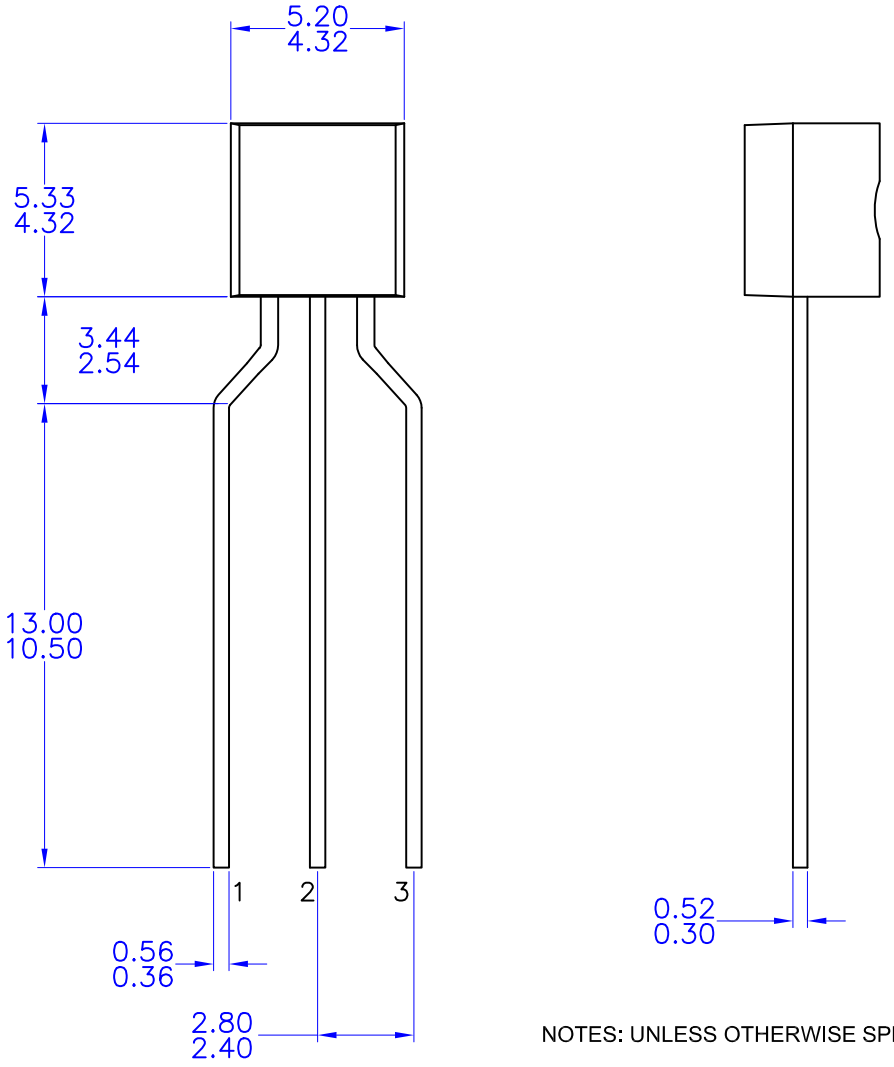
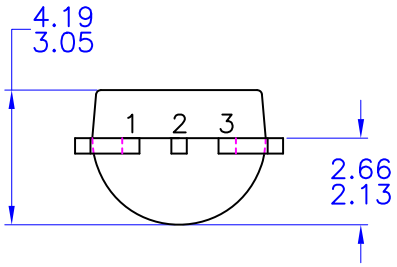
MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

TO−92 3 4.83x4.76 LEADFORMED
CASE 135AR
ISSUE O

DATE 30 SEP 2016





NOTES: UNLESS OTHERWISE SPECIFIED

A) DRAWING WITH REFERENCE TO JEDEC TO-92 RECOMMENDATIONS.
B) ALL DIMENSIONS ARE IN MILLIMETERS.
C) DRAWING CONFORMS TO ASME Y14.5M-1994

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DESCRIPTION:	**TO−92 3 4.83X4.76 LEADFORMED**		**PAGE 1 OF 1**

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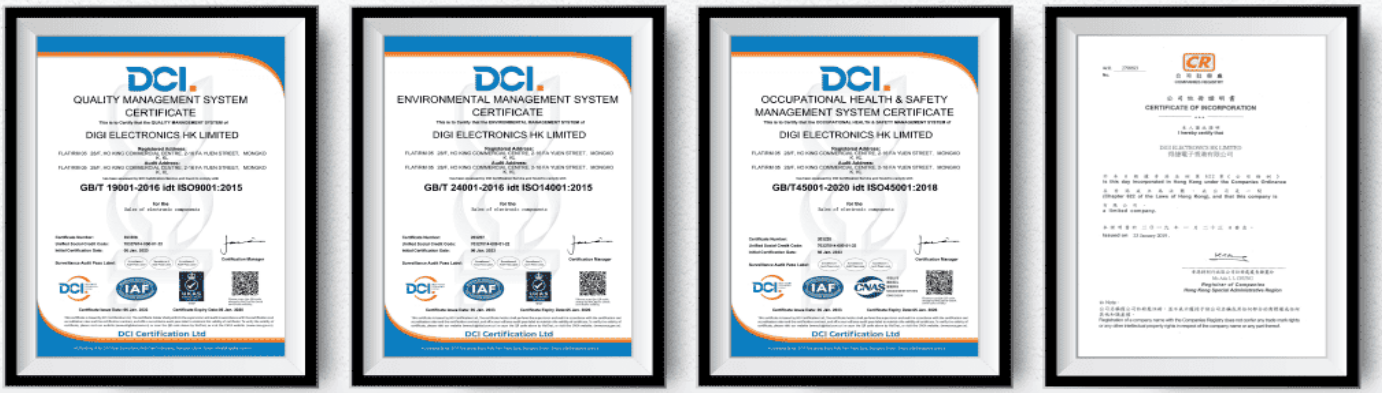

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