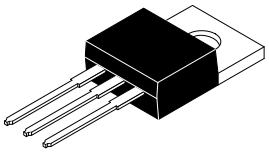
PNP Epitaxial Silicon Transistor

BD239C



1. Base 2. Collector 3. Emitter

TO−220−3LD
CASE 340AT

Medium Power Linear and Switching Applications

- Complement to BD240/A/B/C Respectively

ABSOLUTE MAXIMUM RATINGS (T_J = 25 °C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CEO}(SUS)	Collector-Emitter Voltage	100	V
V_{CER}(SUS)	Collector-Emitter Voltage	115	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	2	A
I_{CP}	Collector Current (PULSE) (Note 1)	4	A
I_B	Base Current	0.6	A
P_C	Collector Dissipation (T_C = 25 °C)	30	W
T_J	Junction Temperature	150	°C
Tstg	Storage Temperature	−65 ~ 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.

1. Pulse Test: PW = ≤ 350 μs, Duty Cycle ≤ 2.0% Pulsed

MARKING DIAGRAM



YWW = Date Code (Year & Week)
BD239C = Specific Device Code

ORDERING INFORMATION

Device	Package	Shipping
BD239C	TO−220−3LD (Pb−Free)	1200 Units / BLKBG
BD239CTU	TO−220−3LD (Pb−Free)	1000 Units / Tube

DISCONTINUED
THIS DEVICE IS NOT AVAILABLE
PLEASE CONTACT YOUR onsemi
REPRESENTATIVE FOR INFORMATION

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

Symbol	Parameter	Test Condition	Value			Unit
			Min	Typ	Max	
V_{CEO}(SUS)	Collector−Emitter Sustaining Voltage (Note 2)	I_C = 30 mA, I_B = 0	100	–	–	V
I_{CEO}	Collector Cut-off Current	V_{CE} = 60 V, I_B = 0	–	–	0.3	mA
I_{CES}	Collector Cut-off Current	V_{CE} = 100 V, V_{BE} = 0	–	–	0.2	mA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 5 V, I_C = 0	–	–	1	mA
h_{FE}	DC Current Gain (Note 2)	V_{CE} = 4 V, I_C = 0.2 A V_{CE} = 4 V, I_C = 1 A	40 15	–	–	–
V_{CE}(sat)	Collector-Emitter Saturation Voltage (Note 2)	I_C = 1 A, I_B = 0.2 A	–	–	0.7	V
V_{BE}(on)	Base-Emitter ON Voltage (Note 2)	V_{CE} = 4 V, I_C = 1 A	–	–	1.3	V

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

2. Pulse Test: PW = ≤ 350 μs, Duty Cycle ≤ 2.0% Pulsed

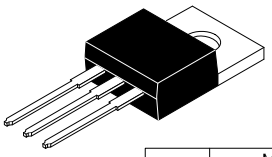
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REVISION HISTORY

Revision	Description of Changes	Date
1	Converted the Document to **onsemi** format + Document Discontinued	2/5/2026

This document has undergone updates prior to the inclusion of this revision history table. The changes tracked here only reflect updates made on the noted approval dates.

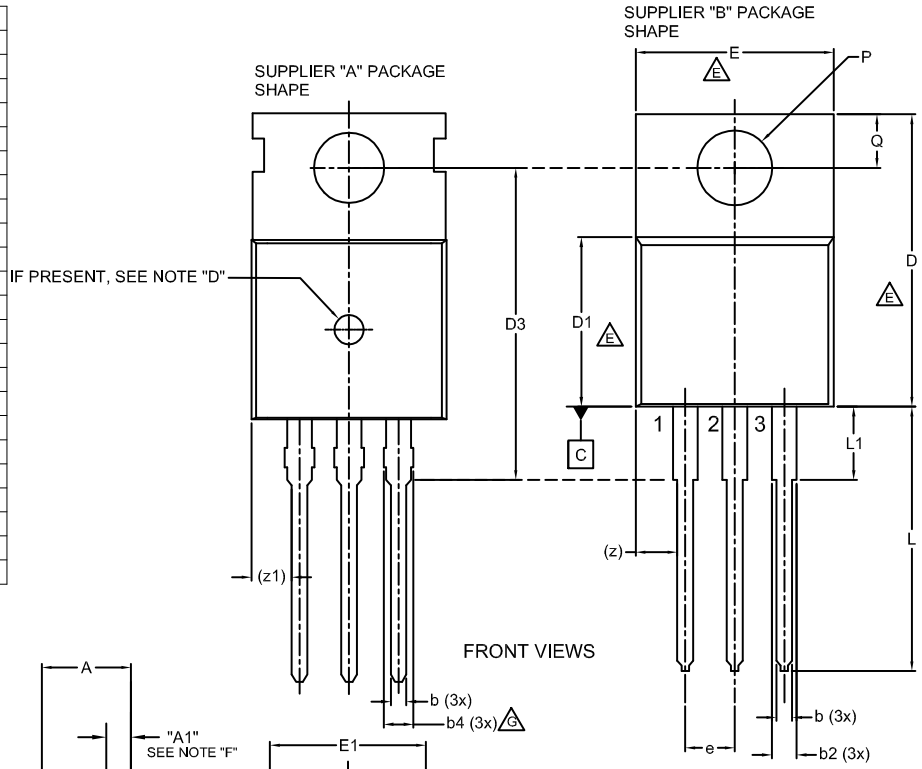
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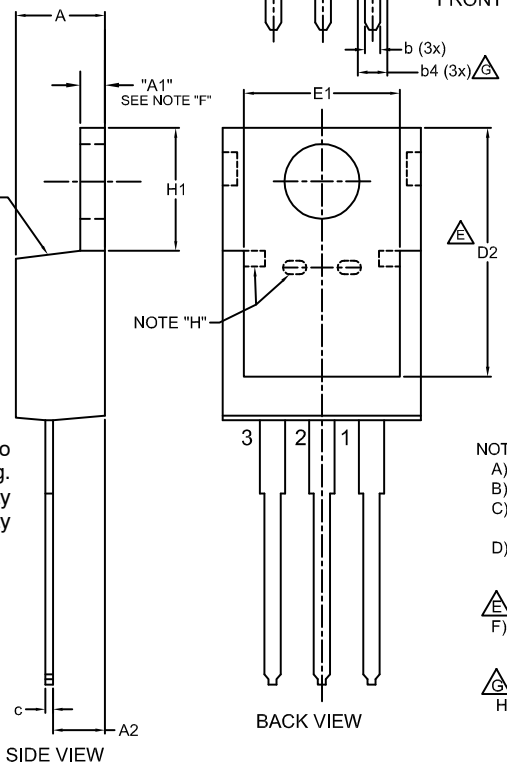


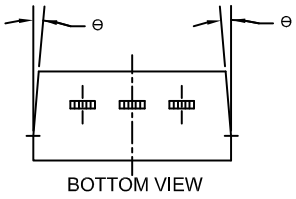
TO−220−3LD
CASE 340AT
ISSUE B

DATE 08 AUG 2022

DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	4.00	--	4.70
A1	SEE NOTE "F"		
A2	2.10	--	2.85
b	0.55	--	1.00
b2	1.10	--	1.62
b4	1.42	--	1.62
c	0.36	--	0.60
D	13.90	--	16.30
D1	8.13	--	9.40
D2	11.50	--	14.30
D3	15.42	--	16.51
E	9.65	--	10.67
E1	7.59	--	8.65
e	2.40	--	2.67
H1	6.06	--	6.69
L	12.70	--	14.04
L1	2.70	--	4.10
P	3.50	--	4.00
Q	2.50	--	3.40
z	2.13 REF		
z1	2.06 REF		
Θ	3°	–	5°







GENERIC MARKING DIAGRAM*



XXXX = Specific Device Code
A = Assembly Location
Y = Year
WW = Work Week
ZZ = Assembly Lot Code

*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G” or microdot “▪”, may or may not be present. Some products may not follow the Generic Marking.

NOTES:
A) REFERENCE JEDEC, TO-220, VARIATION AB
B) ALL DIMENSIONS ARE IN MILLIMETERS.
C) DIMENSIONS COMMON TO ALL PACKAGE SUPPLIERS EXCEPT WHERE NOTED [ ].
D) LOCATION OF MOLDED FEATURE MAY VARY (LOWER LEFT CORNER, LOWER CENTER AND CENTER OF THE PACKAGE)
E) DOES NOT COMPLY JEDEC STANDARD VALUE.
F) "A1" DIMENSIONS AS BELOW:
SINGLE GAUGE = 0.51 - 0.61
DUAL GAUGE = 1.10 - 1.45
G) PRESENCE IS SUPPLIER DEPENDENT
H) SUPPLIER DEPENDENT MOLD LOCKING HOLES IN HEATSINK.

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DESCRIPTION:	**TO−220−3LD**	**PAGE 1 OF 1**

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