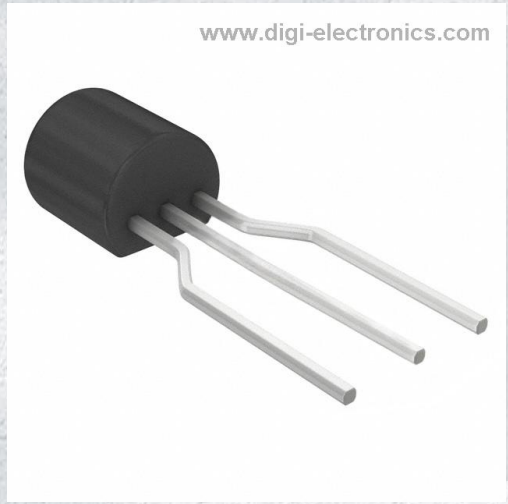
PN2369_D26Z Datasheet



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DiGi Electronics Part Number	PN2369_D26Z-DG
Manufacturer	onsemi
Manufacturer Product Number	PN2369_D26Z
Description	TRANS NPN 15V 0.2A TO92-3
Detailed Description	Bipolar (BJT) Transistor NPN 15 V 200 mA 350 mW T hrough Hole TO-92-3

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Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
PN2369_D26Z	onsemi
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
NPN	200 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
15 V	250mV @ 1mA, 10mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
400nA (ICBO)	40 @ 10mA, 1V
Power - Max:	Frequency - Transition:
350 mW	-
Operating Temperature:	Mounting Type:
-55°C ~ 150°C (TJ)	Through Hole
Package / Case:	Supplier Device Package:
TO-226-3, TO-92-3 (TO-226AA) Formed Leads	TO-92-3
Base Product Number:	
PN236	

Environmental & Export classification

Moisture Sensitivity Level (MSL):	REACH Status:
1 (Unlimited)	REACH Unaffected
ECCN:	HTSUS:
EAR99	8541.21.0095

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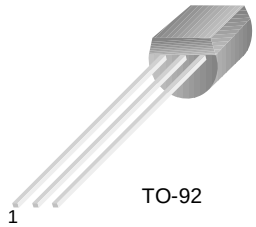
PN2369

NPN Switching Transistor

- This device is designed for high speed saturated switching at collector currents of 10mA to 100mA.
- Sourced from process 21.



TO-92

1. Emitter 2. Base 3. Collector

Absolute Maximum Ratings* T_a=25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CEO}	Collector-Emitter Voltage	15	V
V_{CBO}	Collector-Base Voltage	40	V
V_{EBO}	Emitter-Base Voltage	4.5	V
I_C	Collector Current - Continuous	200	mA
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 ~ 150	°C

* This ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:
1) These rating are based on a maximum junction temperature of 150 degrees C.
2) These are steady limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
Off Characteristics					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage *	I_C = 10mA, I_B = 0	15		V
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage	I_C = 10μA, V_{BE} = 0	40		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = 10μA, I_E = 0	40		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = 10μA, I_C = 0	4.5		V
I_{CBO}	Collector Cutoff Current	V_{CB} = 20V, I_E = 0 V_{CB} = 20V, I_E = 0, T_a = 125°C		0.4 30	μA μA
On Characteristics					
h_{FE}	DC Current Gain *	I_C = 10mA, V_{CE} = 1.0V I_C = 100mA, V_{CE} = 2.0V	40 20	120	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage *	I_C = 10mA, I_B = 1.0mA		0.25	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C = 10mA, I_B = 1.0mA	0.7	0.85	V
Small Signal Characteristics					
C_{obo}	Output Capacitance	V_{CB} = 5.0V, I_E = 0, f = 1.0MHz		4.0	pF
C_{ibo}	Input Capacitance	V_{EB} = 0.5V, I_C = 0, f = 1.0MHz		5.0	pF
h_{fe}	Small -Signal Current Gain	I_C = 10mA, V_{CE} = 10V, R_G = 2.0kΩ, f = 100MHz	5.0		
Switching Characteristics					
t_s	Storage Time	I_{B1} = I_{B2} = I_C = 10mA		13	ns
t_{on}	Turn-On Time	V_{CC} = 3.0V, I_C = 10mA, I_{B1} = 3.0mA		12	ns
t_{off}	Turn-Off Time	V_{CC} = 3.0V, I_C = 10mA, I_{B1} = 3.0mA, I_{B2} = 1.5mA		18	ns

* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

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Thermal Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°C	350 2.8	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	125	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

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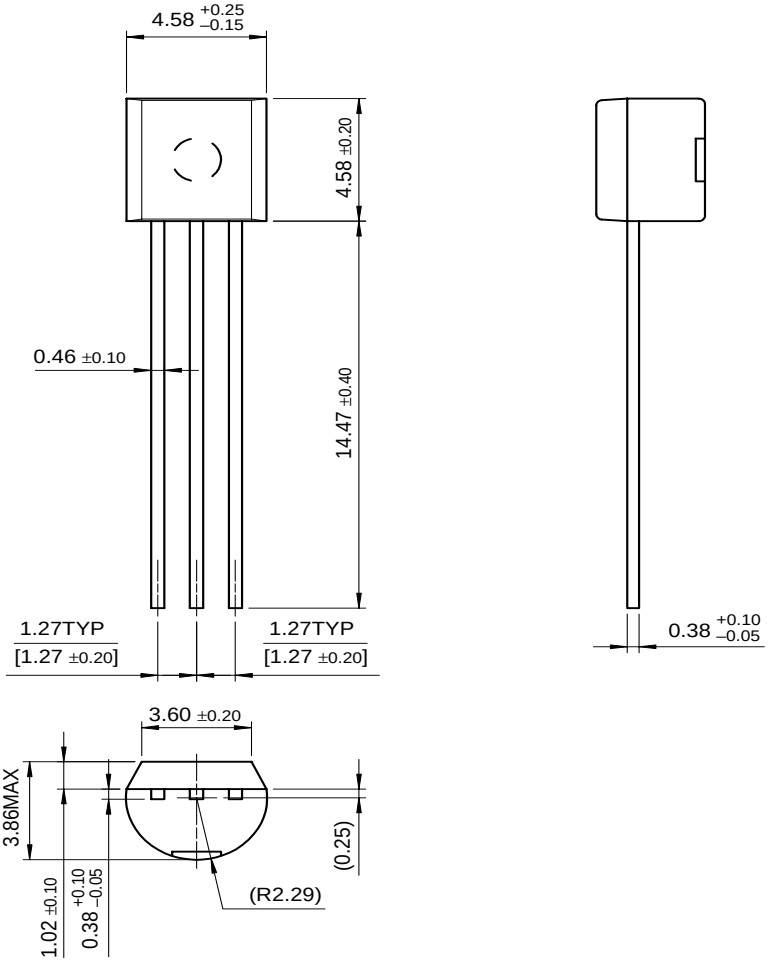
Package Dimensions

TO-92



Dimensions in Millimeters

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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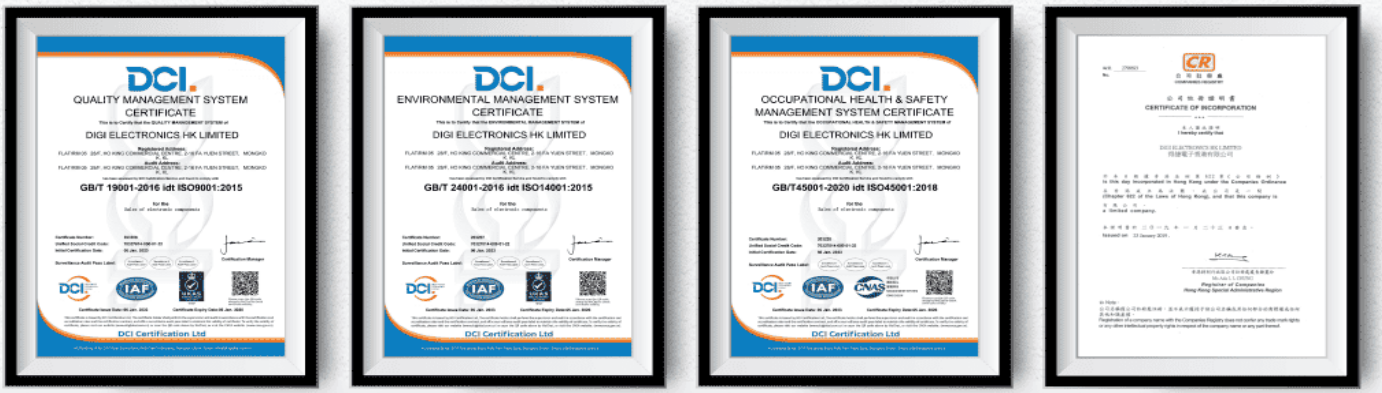

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