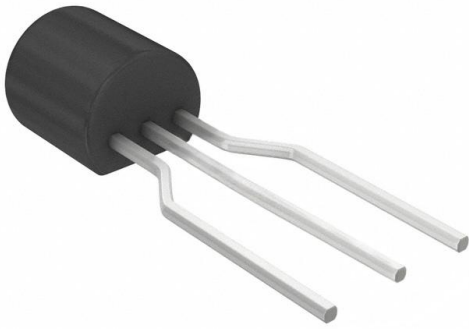


FJN4309RTA Datasheet

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DiGi Electronics Part Number	FJN4309RTA-DG
Manufacturer	onsemi
Manufacturer Product Number	FJN4309RTA
Description	TRANS PREBIAS PNP 40V TO92-3
Detailed Description	Pre-Biased Bipolar Transistor (BJT) PNP - Pre-Biased 40 V 100 mA 200 MHz 300 mW Through Hole TO-92-3



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

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Purchase and inquiry

Manufacturer Product Number:

FJN4309RTA

Series:

-

Transistor Type:

PNP - Pre-Biased

Voltage - Collector Emitter Breakdown (Max):

40 V

DC Current Gain (hFE) (Min) @ Ic, Vce:

100 @ 1mA, 5V

Current - Collector Cutoff (Max):

100nA (ICBO)

Power - Max:

300 mW

Package / Case:

TO-226-3, TO-92-3 (TO-226AA) Formed Leads

Base Product Number:

FJN430

Manufacturer:

onsemi

Product Status:

Obsolete

Current - Collector (Ic) (Max):

100 mA

Resistor - Base (R1):

4.7 kOhms

Vce Saturation (Max) @ Ib, Ic:

300mV @ 1mA, 10mA

Frequency - Transition:

200 MHz

Mounting Type:

Through Hole

Supplier Device Package:

TO-92-3

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.21.0075

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



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October 2015

FJN4309R

PNP Epitaxial Silicon Transistor with Bias Resistor

Features

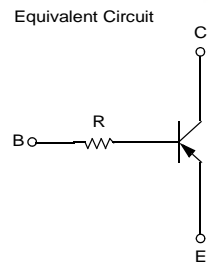
- 100 mA Output Current Capability
- Built-in Bias Resistor ($R = 4.7 \text{ k}\Omega$)

Applications

- Switching, Interface, and Driver Circuits
- Inverters
- Digital Applications in Industrial Segments

Description

Transistors with built-in resistors can be excellent space- and cost-saving solutions by reducing component count and simplifying circuit design.



Ordering Information

Part Number	Top Mark	Package	Packing Method
FJN4309RTA	R4309	TO-92 3L	Ammo

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-100	mA
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 to 150	$^\circ\text{C}$

Thermal Characteristics⁽¹⁾Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	300	mW
	Derate Above $T_A = 25^\circ\text{C}$	2.4	mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	416	$^\circ\text{C/W}$

Note:1. PCB size: FR-4 76 x 114 x 0.6T mm³ (3.0 inch x 4.5 inch x 0.062 inch) with minimum land pattern size.**Electrical Characteristics**Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = -100 \mu\text{A}$, $I_E = 0$	-40			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -1 \text{ mA}$, $I_B = 0$	-40			V
I_{CBO}	Collector Cut-Off Current	$V_{CB} = -30 \text{ V}$, $I_E = 0$			-0.1	μA
h_{FE}	DC Current Gain	$V_{CE} = -5 \text{ V}$, $I_C = -1 \text{ mA}$	100		600	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = -10 \text{ mA}$, $I_B = -1 \text{ mA}$			-0.3	V
C_{ob}	Output Capacitance	$V_{CB} = -10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$		5.5		pF
f_T	Current Gain Bandwidth Product	$V_{CE} = -10 \text{ V}$, $I_C = -5 \text{ mA}$		200		MHz
R	Input Resistor		3.2	4.7	6.2	k Ω

Typical Performance Characteristics

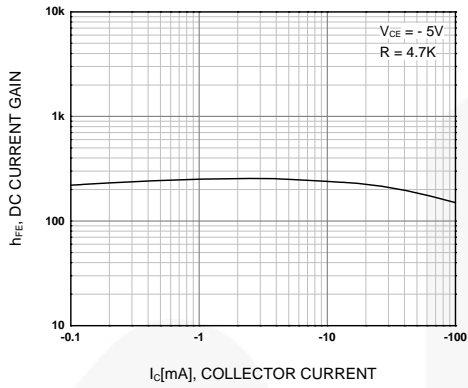


Figure 1. DC Current Gain

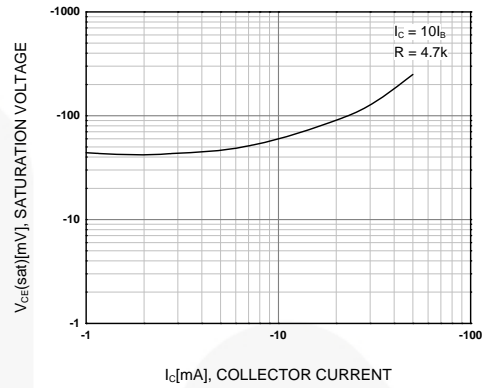


Figure 2. Collector-Emitter Saturation Voltage

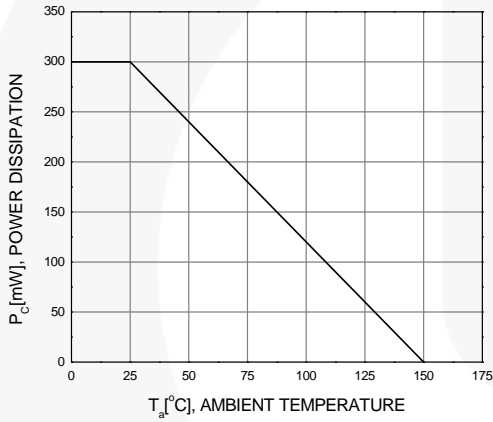
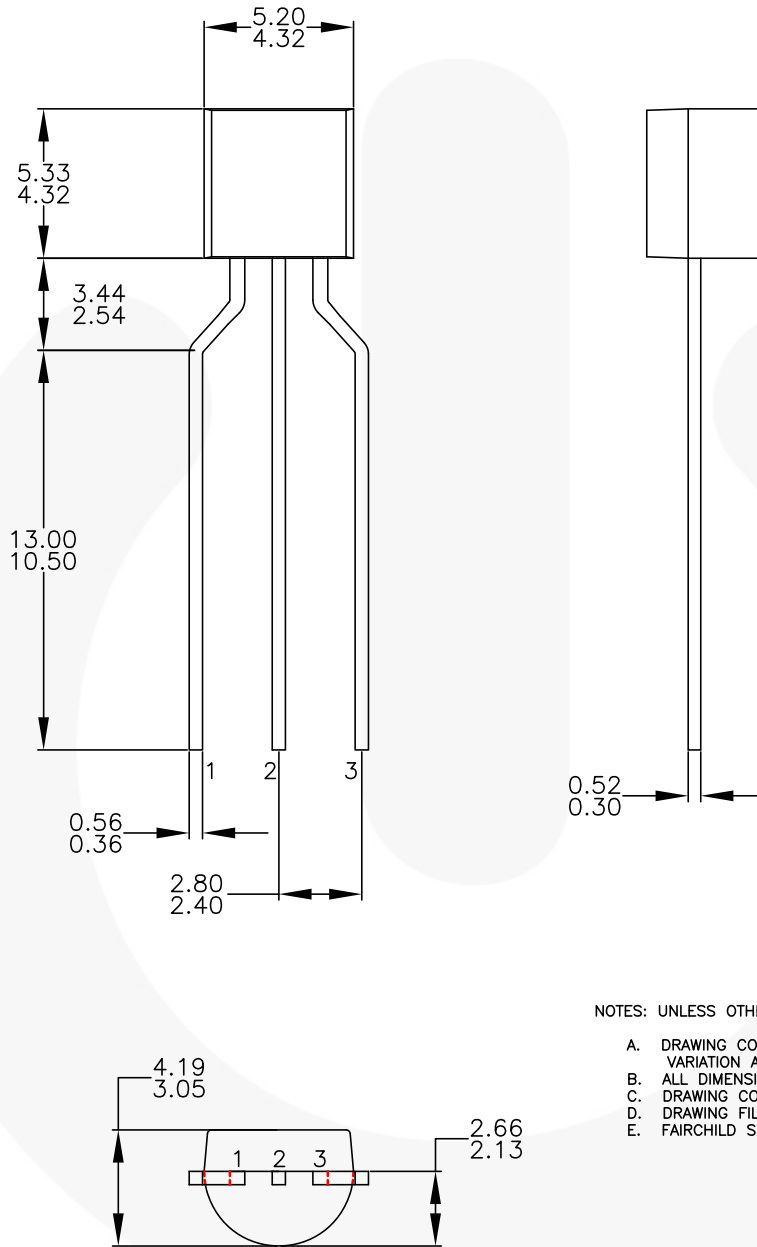


Figure 3. Power Derating

Physical Dimensions



NOTES: UNLESS OTHERWISE SPECIFIED






- A. DRAWING CONFORMS TO JEDEC MS-013, VARIATION AC.
- B. ALL DIMENSIONS ARE IN MILLIMETERS.
- C. DRAWING CONFORMS TO ASME Y14.5M-2009.
- D. DRAWING FILENAME: MKT-ZA03FREV3.
- E. FAIRCHILD SEMICONDUCTOR.

Figure 5. 3-LEAD, TO-92, MOLDED 0.200 IN-LINE SPACING LD FORM



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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

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