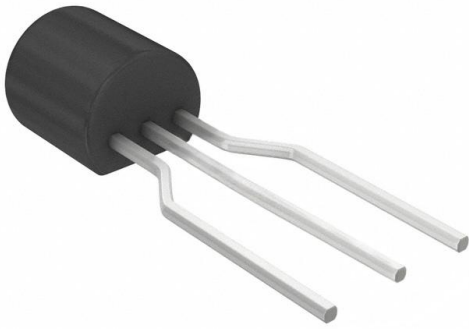


FJN4301RTA Datasheet

www.digi-electronics.com



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	FJN4301RTA-DG
Manufacturer	onsemi
Manufacturer Product Number	FJN4301RTA
Description	TRANS PREBIAS PNP 50V TO92-3
Detailed Description	Pre-Biased Bipolar Transistor (BJT) PNP - Pre-Biased 50 V 100 mA 200 MHz 300 mW Through Hole TO-92-3



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

FJN4301RTA

Series:

-

Transistor Type:

PNP - Pre-Biased

Voltage - Collector Emitter Breakdown (Max):

50 V

Resistor - Emitter Base (R2):

4.7 kOhms

Vce Saturation (Max) @ Ib, Ic:

300mV @ 500µA, 10mA

Frequency - Transition:

200 MHz

Mounting Type:

Through Hole

Supplier Device Package:

TO-92-3

Manufacturer:

onsemi

Product Status:

Obsolete

Current - Collector (Ic) (Max):

100 mA

Resistor - Base (R1):

4.7 kOhms

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

20 @ 10mA, 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

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

FJN4301R

PNP Epitaxial Silicon Transistor with Bias Resistor

Features

- 100 mA Output Current Capability
- Built-in Bias Resistor ($R_1 = 4.7 \text{ k}\Omega$, $R_2 = 4.7 \text{ k}\Omega$)

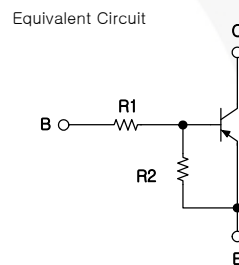
Applications

- 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
FJN4301RTA	R4301	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	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-10	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	$I_C = -10 \mu\text{A}$, $I_E = 0$	-50			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -100 \mu\text{A}$, $I_B = 0$	-50			V
I_{CBO}	Collector Cut-Off Current	$V_{CB} = -40 \text{V}$, $I_E = 0$			-0.1	μA
h_{FE}	DC Current Gain	$V_{CE} = -5 \text{V}$, $I_C = -10 \text{mA}$	20			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -10 \text{mA}$, $I_B = -0.5 \text{mA}$			-0.3	V
f_T	Current Gain Bandwidth Product	$V_{CE} = -10 \text{V}$, $I_C = -5 \text{mA}$		200		MHz
C_{ob}	Output Capacitance	$V_{CB} = -10 \text{V}$, $I_E = 0$, $f = 1.0 \text{MHz}$		5.5		pF
$V_I(\text{off})$	Input-Off Voltage	$V_{CE} = -5 \text{V}$, $I_C = -100 \mu\text{A}$			-0.5	V
$V_I(\text{on})$	Input-On Voltage	$V_{CE} = -0.3 \text{V}$, $I_C = -20 \text{mA}$	-3			V
R_1	Input Resistor		3.2	4.7	6.2	k Ω
R_1/R_2	Resistor Ratio		0.9	1.0	1.1	

Typical Performance Characteristics

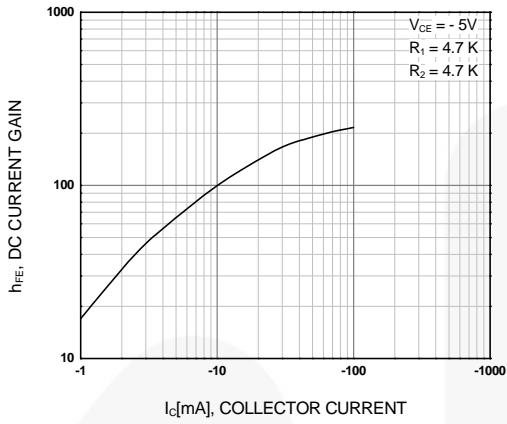


Figure 1. DC Current Gain

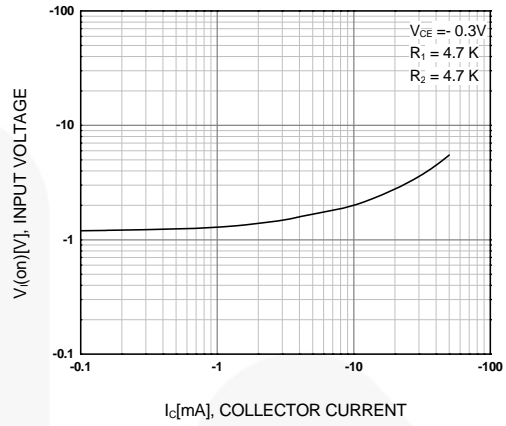


Figure 2. Input-On Voltage

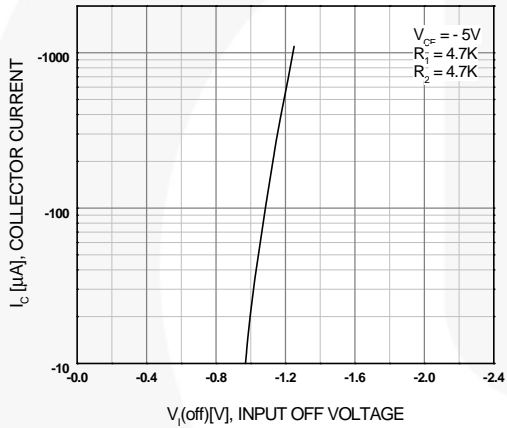


Figure 3. Input-Off Voltage

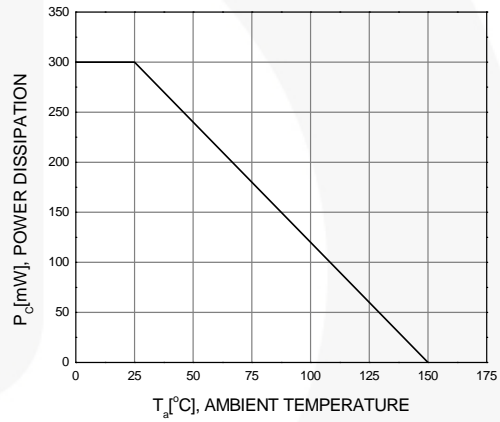
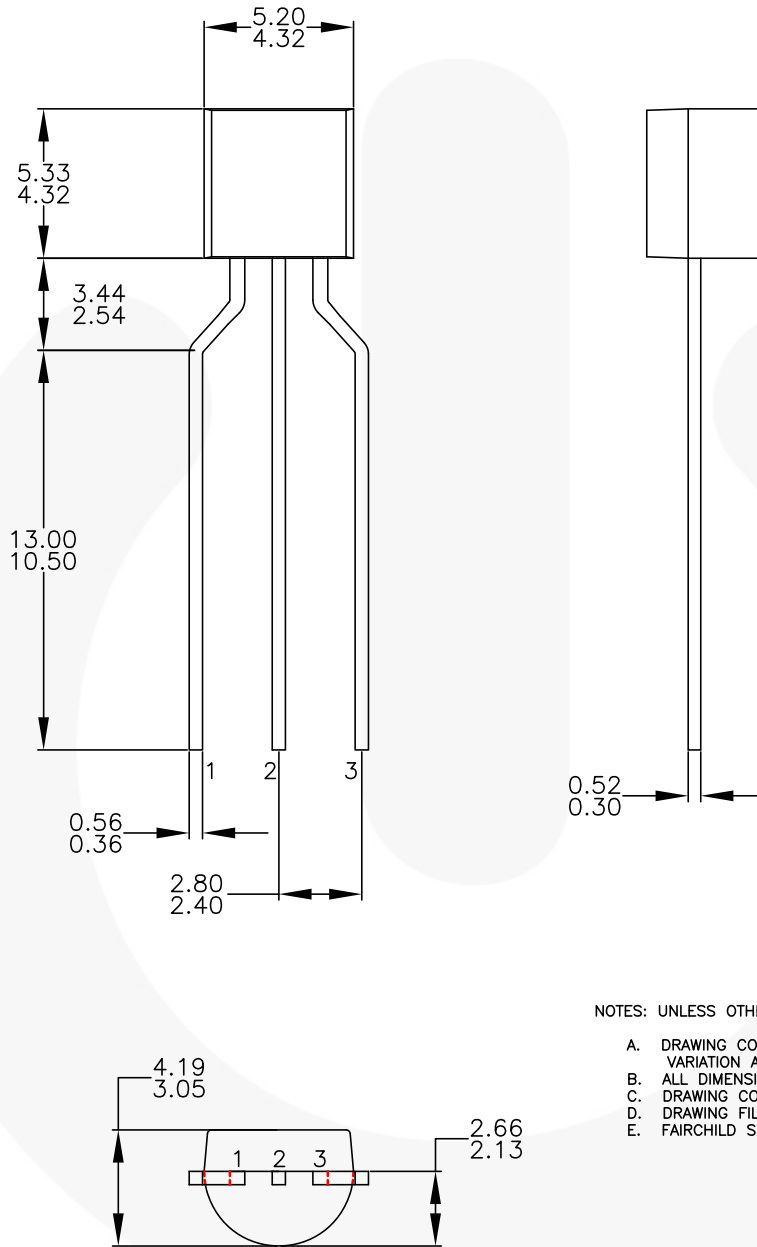


Figure 4. Power Derating

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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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.
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