

# BD17910STU Datasheet



No Picture Yet

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DiGi Electronics Part Number	BD17910STU-DG
Manufacturer	<a href="#">Fairchild Semiconductor</a>
Manufacturer Product Number	BD17910STU
Description	TRANS NPN 80V 3A TO126-3
Detailed Description	Bipolar (BJT) Transistor NPN 80 V 3 A 3MHz 30 W Th rough Hole TO-126-3



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## Purchase and inquiry

Manufacturer Product Number:

BD17910STU

Series:

-

Transistor Type:

NPN

Voltage - Collector Emitter Breakdown (Max):

80 V

Current - Collector Cutoff (Max):

100 $\mu$ A (ICBO)

Power - Max:

30 W

Operating Temperature:

150°C (TJ)

Package / Case:

TO-225AA, TO-126-3

Manufacturer:

Fairchild Semiconductor

Product Status:

Active

Current - Collector (Ic) (Max):

3 A

Vce Saturation (Max) @ Ib, Ic:

800mV @ 100mA, 1A

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

63 @ 150mA, 2V

Frequency - Transition:

3MHz

Mounting Type:

Through Hole

Supplier Device Package:

TO-126-3

## Environmental & Export classification

Moisture Sensitivity Level (MSL):

Vendor Undefined

REACH Status:

REACH Affected



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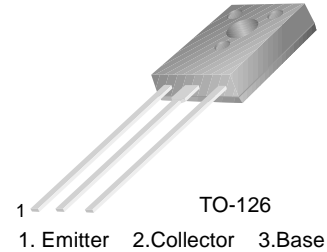
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## BD175/177/179

### Medium Power Linear and Switching Applications

- Complement to BD 176/178/180 respectively



### NPN Epitaxial Silicon Transistor

#### Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	*Collector-Base Voltage : BD175	45	V
	: BD177	60	V
	: BD179	80	V
$V_{CEO}$	Collector-Emitter Voltage : BD175	45	V
	: BD177	60	V
	: BD179	80	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current (DC)	3	A
$I_{CP}$	*Collector Current (Pulse)	7	A
$P_C$	Collector Dissipation ( $T_C=25^\circ\text{C}$ )	30	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	- 65 ~ 150	$^\circ\text{C}$

#### Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units	
$V_{CEO(sus)}$	* Collector-Emitter Sustaining Voltage : BD175	$I_C = 100\text{mA}, I_B = 0$	45			V	
	: BD177					60	V
	: BD179					80	V
$I_{CBO}$	Collector Cut-off Current : BD175	$V_{CB} = 45\text{V}, I_E = 0$			100	$\mu\text{A}$	
	: BD177	$V_{CB} = 60\text{V}, I_E = 0$			100	$\mu\text{A}$	
	: BD179	$V_{CB} = 80\text{V}, I_E = 0$			100	$\mu\text{A}$	
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$			1	mA	
$h_{FE1}$ $h_{FE2}$	* DC Current Gain	$V_{CE} = 2\text{V}, I_C = 150\text{mA}$ $V_{CE} = 2\text{V}, I_C = 1\text{A}$	40 15		250		
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = 1\text{A}, I_B = 0.1\text{A}$			0.8	V	
$V_{BE(on)}$	* Base-Emitter On Voltage	$V_{CE} = 2\text{V}, I_C = 1\text{A}$			1.3	V	
$f_T$	Current Gain Bandwidth Product	$V_{CE} = 10\text{V}, I_C = 250\text{mA}$	3			MHz	

\* Pulse Test: PW=300 $\mu\text{s}$ , duty Cycle=1.5% Pulsed

#### $h_{FE}$ Classification

Classification	6	10	16
$h_{FE1}$	40 ~ 100	63 ~ 160	100 ~ 250

\* Classification 16: Only BD175

# Typical Characteristics

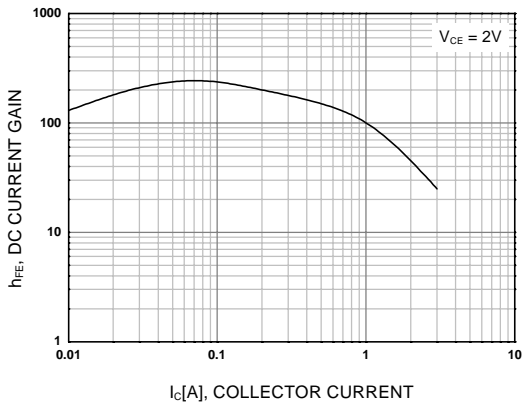


Figure 1. DC current Gain

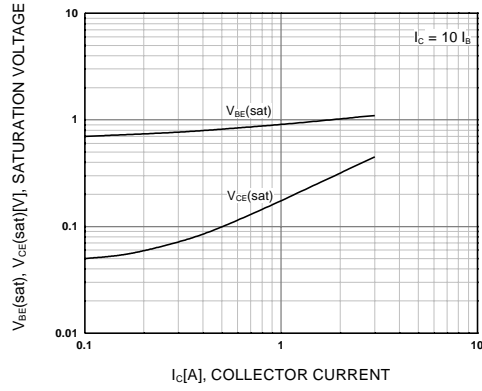


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

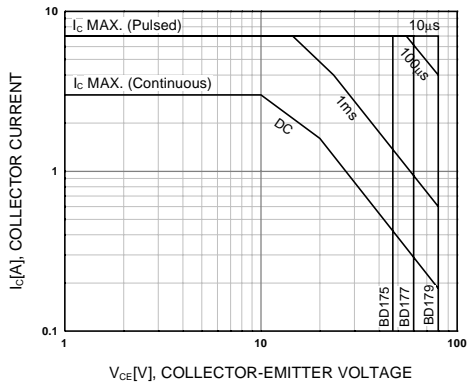


Figure 3. Safe Operating Area

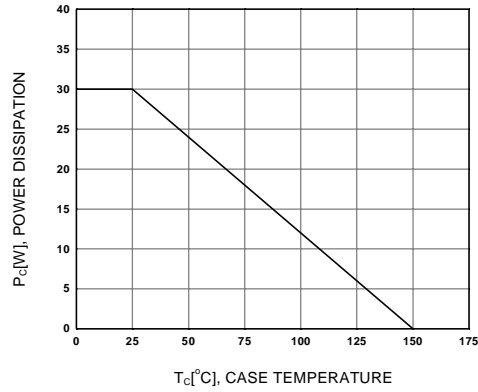
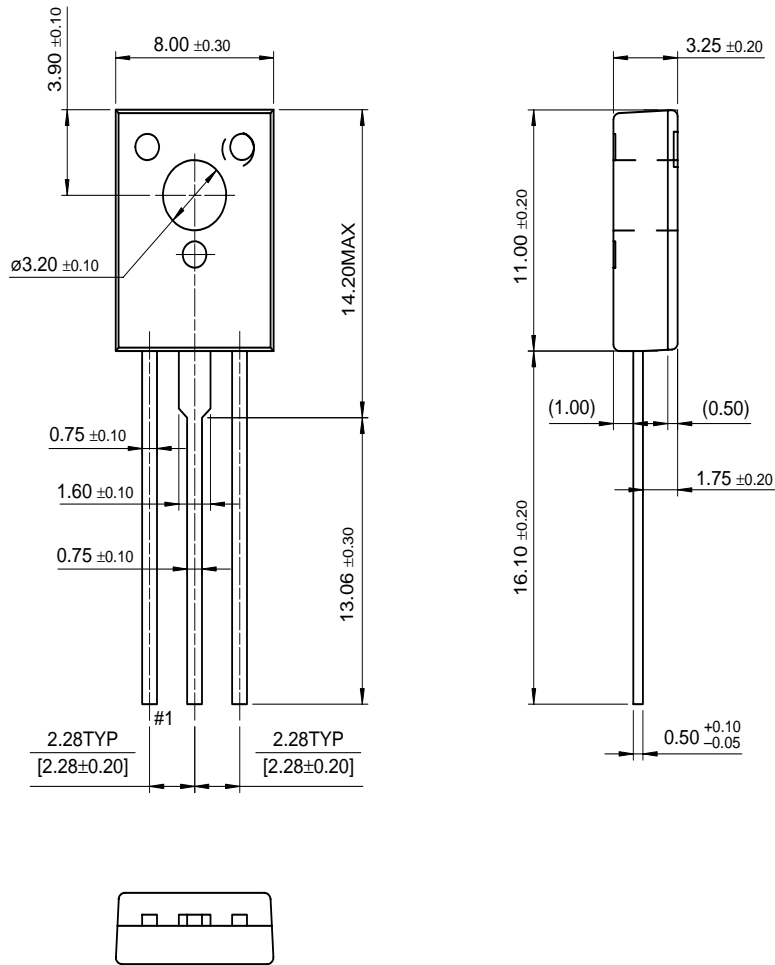


Figure 4. Power Derating

Package Demensions

TO-126



Dimensions in Millimeters

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