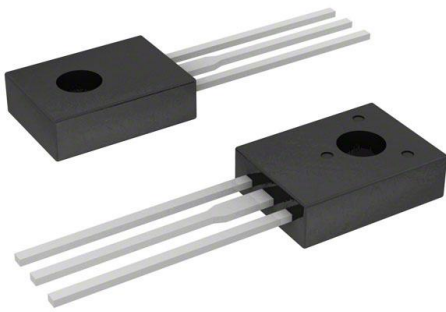


BD1386STU Datasheet

www.digi-electronics.com



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

DiGi Electronics Part Number	BD1386STU-DG
Manufacturer	onsemi
Manufacturer Product Number	BD1386STU
Description	TRANS PNP 60V 1.5A TO126-3
Detailed Description	Bipolar (BJT) Transistor PNP 60 V 1.5 A 1.25 W Through Hole TO-126-3



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:

BD1386STU

Series:

-

Transistor Type:

PNP

Voltage - Collector Emitter Breakdown (Max):

60 V

Current - Collector Cutoff (Max):

100nA (ICBO)

Power - Max:

1.25 W

Operating Temperature:

150°C (TJ)

Package / Case:

TO-225AA, TO-126-3

Base Product Number:

BD138

Manufacturer:

onsemi

Product Status:

Obsolete

Current - Collector (Ic) (Max):

1.5 A

Vce Saturation (Max) @ Ib, Ic:

500mV @ 50mA, 500mA

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

40 @ 150mA, 2V

Frequency - Transition:

-

Mounting Type:

Through Hole

Supplier Device Package:

TO-126-3

Environmental & Export classification

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

REACH Status:

REACH Unaffected

HTSUS:

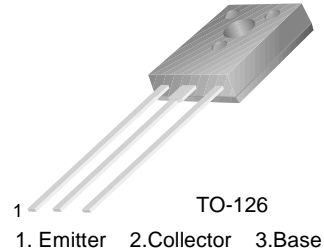
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BD136/138/140

Medium Power Linear and Switching Applications

- Complement to BD135, BD137 and BD139 respectively



PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage : BD136	- 45	V
	: BD138	- 60	V
	: BD140	- 80	V
V_{CEO}	Collector-Emitter Voltage : BD136	- 45	V
	: BD138	- 60	V
	: BD140	- 80	V
V_{EBO}	Emitter-Base Voltage	- 5	V
I_C	Collector Current (DC)	- 1.5	A
I_{CP}	Collector Current (Pulse)	- 3.0	A
I_B	Base Current	- 0.5	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	12.5	W
P_C	Collector Dissipation ($T_a=25^\circ\text{C}$)	1.25	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 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 : BD136 : BD138 : BD140	$I_C = - 30\text{mA}, I_B = 0$	- 45			V
			- 60			V
			- 80			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = - 30\text{V}, I_E = 0$			- 0.1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = - 5\text{V}, I_C = 0$			- 10	μA
h_{FE1}	* DC Current Gain	$V_{CE} = - 2\text{V}, I_C = - 5\text{mA}$	25			
h_{FE2}		$V_{CE} = - 2\text{V}, I_C = - 0.5\text{A}$	25			
h_{FE3}		$V_{CE} = - 2\text{V}, I_C = - 150\text{mA}$	40		250	
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = - 500\text{mA}, I_B = - 50\text{mA}$			- 0.5	V
$V_{BE(on)}$	* Base-Emitter ON Voltage	$V_{CE} = - 2\text{V}, I_C = - 0.5\text{A}$			- 1	V

* Pulse Test: PW=350 μs , duty Cycle=2% Pulsed

h_{FE} Classification

Classification	6	10	16
h_{FE3}	40 ~ 100	63 ~ 160	100 ~ 250

Typical Characteristics

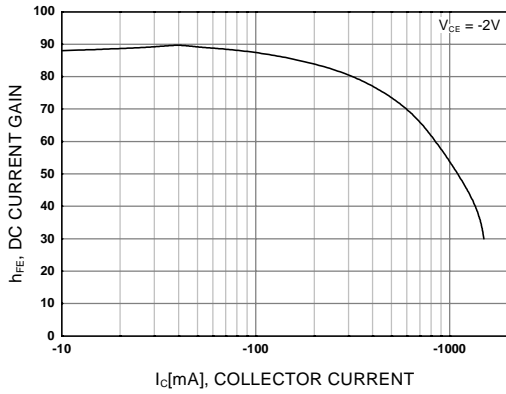


Figure 1. DC current Gain

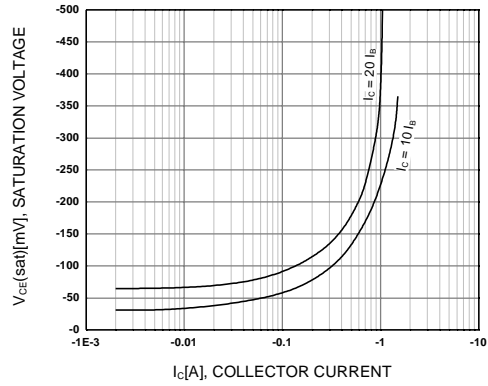


Figure 2. Collector-Emitter Saturation Voltage

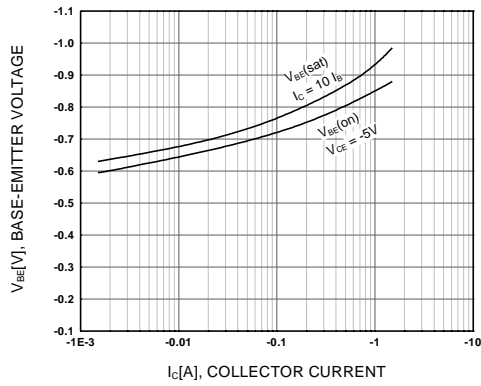


Figure 3. Base-Emitter Voltage

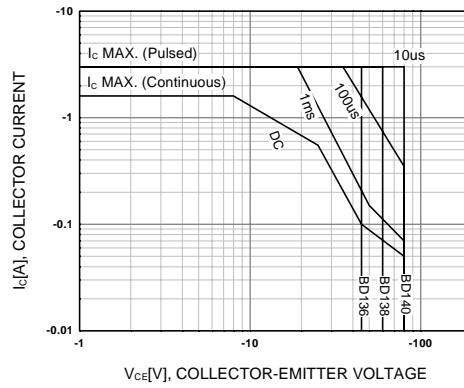


Figure 4. Safe Operating Area

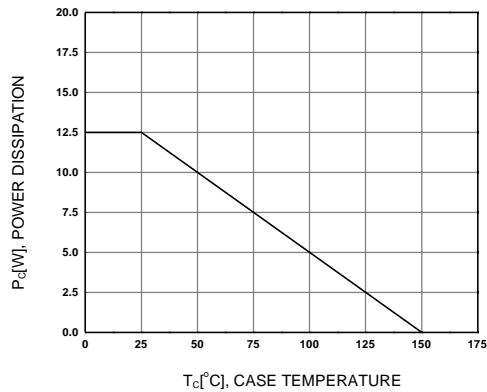
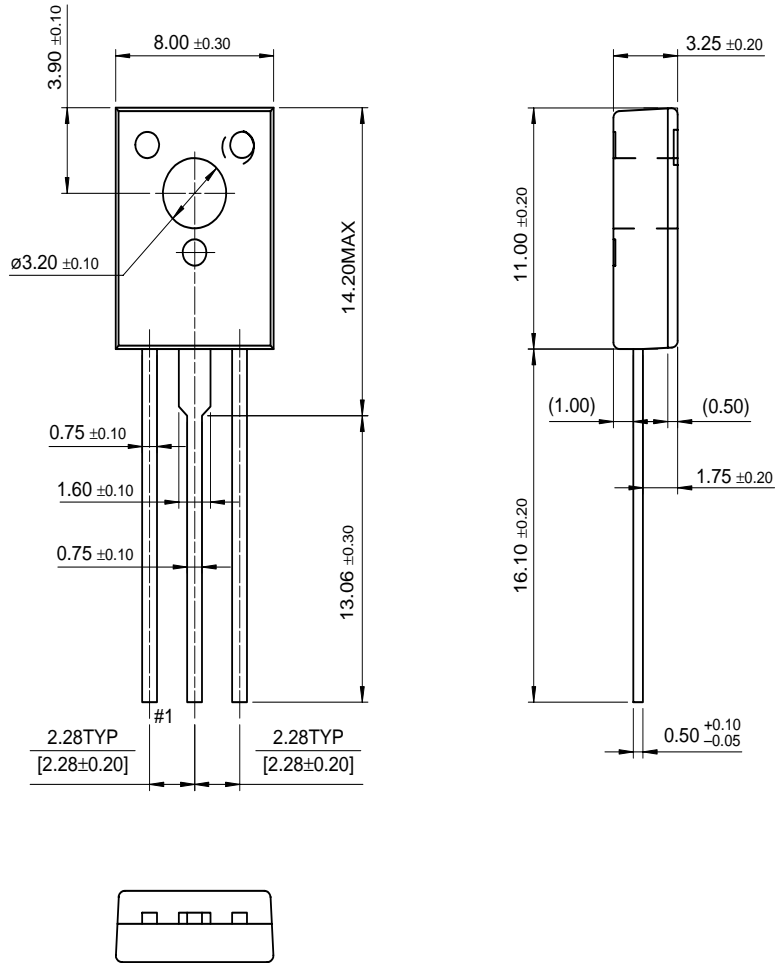


Figure 5. Power Derating

Package Demensions

TO-126



Dimensions in Millimeters

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FAST®	Quiet Series™	
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GTO™	SuperSOT™-6	

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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.
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