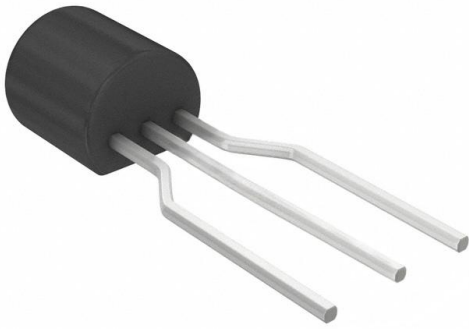


# BC368\_D26Z Datasheet

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DiGi Electronics Part Number	BC368_D26Z-DG
Manufacturer	<a href="#">onsemi</a>
Manufacturer Product Number	BC368_D26Z
Description	TRANS NPN 20V 2A TO92-3
Detailed Description	Bipolar (BJT) Transistor NPN 20 V 2 A 45MHz 625 mW Through Hole TO-92-3



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

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## Purchase and inquiry

Manufacturer Product Number:

BC368\_D26Z

Series:

-

Transistor Type:

NPN

Voltage - Collector Emitter Breakdown (Max):

20 V

Current - Collector Cutoff (Max):

10 $\mu$ A (ICBO)

Power - Max:

625 mW

Operating Temperature:

-55°C ~ 150°C (TJ)

Package / Case:

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

Base Product Number:

BC368

Manufacturer:

onsemi

Product Status:

Obsolete

Current - Collector (Ic) (Max):

2 A

Vce Saturation (Max) @ Ib, Ic:

500mV @ 100mA, 1A

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

85 @ 500mA, 1V

Frequency - Transition:

45MHz

Mounting Type:

Through Hole

Supplier Device Package:

TO-92-3

## Environmental & Export classification

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

REACH Status:

REACH Unaffected

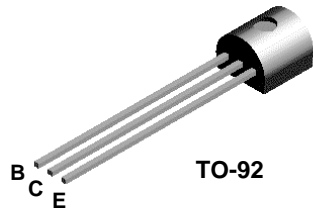
HTSUS:

8541.21.0095





## BC368



### NPN General Purpose Amplifier

This device is designed for general purpose medium power amplifiers and switches requiring collector currents to 1.5 A. Sourced from Process 37.

#### Absolute Maximum Ratings\* TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CEO}$	Collector-Emitter Voltage	20	V
$V_{CES}$	Collector-Base Voltage	25	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current - Continuous	2.0	A
$T_J, T_{stg}$	Operating and Storage Junction Temperature Range	-55 to +150	°C

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

#### NOTES:

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

#### Thermal Characteristics TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		BC368	
$P_D$	Total Device Dissipation Derate above 25°C	625	mW
		5.0	mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	°C/W

**NPN General Purpose Amplifier**  
(continued)

**Electrical Characteristics**

TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
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**OFF CHARACTERISTICS**

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10 \text{ mA}, I_B = 0$	20		V
$V_{(BR)CES}$	Collector-Base Breakdown Voltage	$I_C = 100 \text{ } \mu\text{A}, I_E = 0$	25		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10 \text{ } \mu\text{A}, I_C = 0$	5.0		V
$I_{CBO}$	Collector-Cutoff Current	$V_{CB} = 25 \text{ V}, I_E = 0$ $V_{CB} = 25 \text{ V}, I_E = 0, T_A = 150^\circ\text{C}$		10 1.0	$\mu\text{A}$ mA
$I_{EBO}$	Emitter-Cutoff Current	$V_{EB} = 5.0 \text{ V}, I_C = 0$		10	$\mu\text{A}$

**ON CHARACTERISTICS**

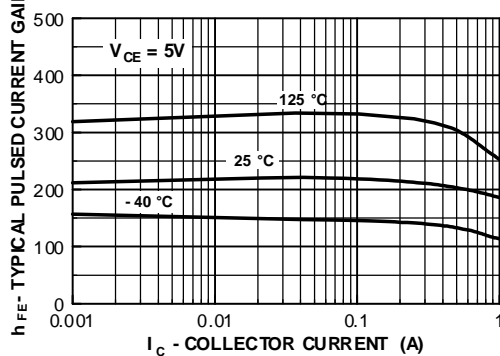
$h_{FE}$	DC Current Gain	$I_C = 5.0 \text{ mA}, V_{CE} = 10 \text{ V}$ $I_C = 0.5 \text{ A}, V_{CE} = 1.0 \text{ V}$ $I_C = 1.0 \text{ A}, V_{CE} = 1.0 \text{ V}$	50 85 60	375	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 1.0 \text{ A}, I_B = 100 \text{ mA}$		0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = 1.0 \text{ A}, V_{CE} = 1.0 \text{ V}$		1.0	V

**SMALL SIGNAL CHARACTERISTICS**

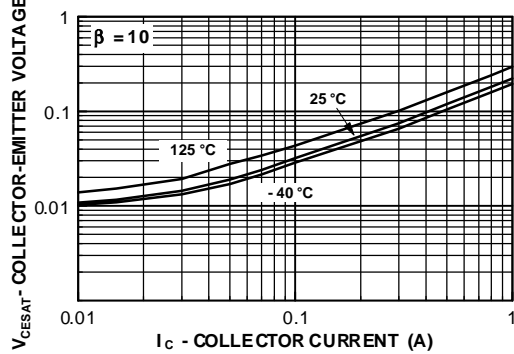
$f_T$	Current Gain - Bandwidth Product	$I_C = 10 \text{ mA}, V_{CE} = 5.0 \text{ V},$ $f = 35 \text{ MHz}$	45		MHz
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**Typical Characteristics**

**Typical Pulsed Current Gain vs Collector Current**



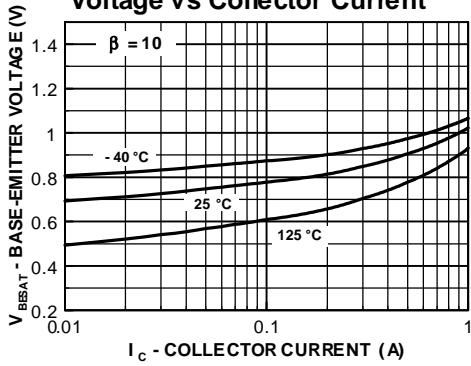
**Collector-Emitter Saturation Voltage vs Collector Current**



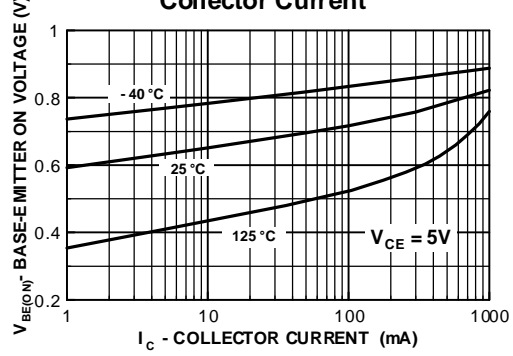
**NPN General Purpose Amplifier**  
(continued)

**Typical Characteristics** (continued)

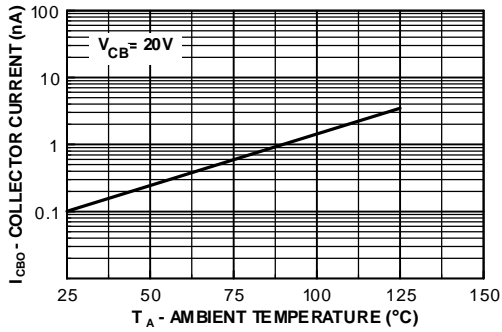
**Base-Emitter Saturation Voltage vs Collector Current**



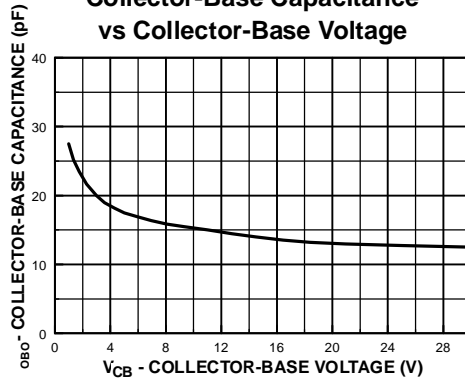
**Base-Emitter ON Voltage vs Collector Current**



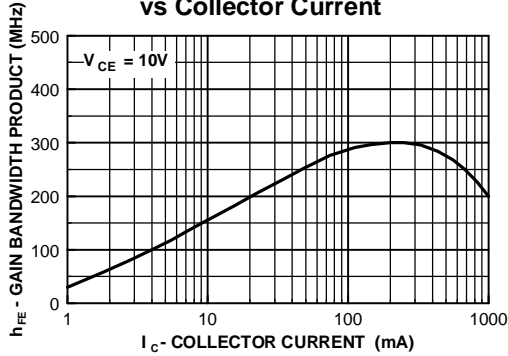
**Collector-Cutoff Current vs Ambient Temperature**



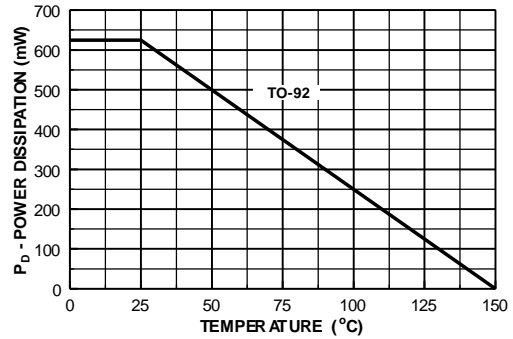
**Collector-Base Capacitance vs Collector-Base Voltage**



**Gain Bandwidth Product vs Collector Current**



**Power Dissipation vs Ambient Temperature**



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