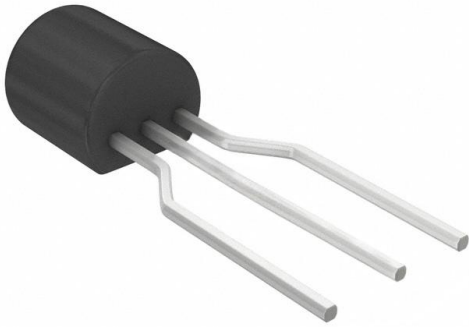


# BC547-AP Datasheet

[www.digi-electronics.com](http://www.digi-electronics.com)



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

DiGi Electronics Part Number	BC547-AP-DG
Manufacturer	<a href="#">Micro Commercial Co</a>
Manufacturer Product Number	BC547-AP
Description	TRANS NPN 45V 0.1A TO92
Detailed Description	Bipolar (BJT) Transistor NPN 45 V 100 mA 300MHz 6 25 mW Through Hole TO-92



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:

BC547-AP

Series:

-

Transistor Type:

NPN

Voltage - Collector Emitter Breakdown (Max):

45 V

Current - Collector Cutoff (Max):

-

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:

BC547

Manufacturer:

Micro Commercial Co

Product Status:

Obsolete

Current - Collector (Ic) (Max):

100 mA

Vce Saturation (Max) @ Ib, Ic:

300mV @ 5mA, 100mA

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

110 @ 2mA, 5V

Frequency - Transition:

300MHz

Mounting Type:

Through Hole

Supplier Device Package:

TO-92

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.21.0075

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

## Features

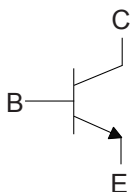
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 200°C/W Junction to Ambient
- Thermal Resistance: 83.3°C/W Junction to Case

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	BC546	80	V
	BC547	50	
	BC548	30	
Collector-Emitter Voltage	BC546	65	V
	BC547	45	
	BC548	30	
Emitter-Base Voltage	BC546	6	V
	BC547	6	
	BC548	6	
Continuous Collector Current	$I_C$	0.1	A
Power Dissipation @ $T_A=25^\circ\text{C}$	$P_D$	0.625	W
Power Dissipation @ $T_C=25^\circ\text{C}$	$P_D$	1.5	W

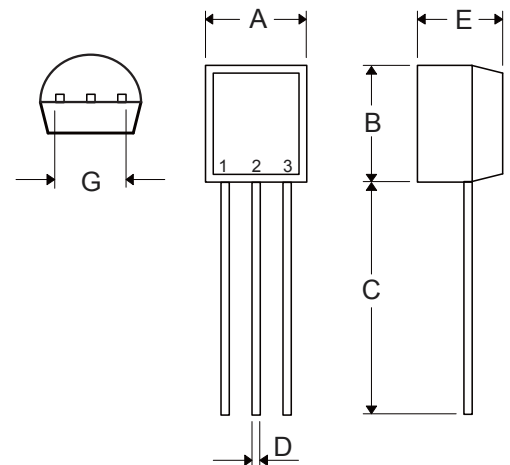
## Internal Structure



1.COLLECTOR  
2.BASE  
3.EMITTER

# NPN Silicon Amplifier Transistor

## TO-92



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.169	0.185	4.30	4.70	
B	0.169	0.185	4.30	4.70	
C	0.500	-----	12.70	-----	
D	0.015	0.022	0.38	0.55	
E	0.130	0.146	3.30	3.70	
G	0.095	0.105	2.42	2.67	Straight Lead
	0.173	0.220	4.40	5.60	Bent

Electrical Characteristics @  $T_A=25^\circ\text{C}$  Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	BC546	80			V	$I_C=100\mu\text{A}, I_E=0$
	BC547	50				
	BC548	30				
Collector-Emitter Breakdown Voltage	BC546	65			V	$I_C=1\text{mA}, I_B=0$
	BC547	45				
	BC548	30				
Emitter-Base Breakdown Voltage	BC546	6			V	$I_E=10\mu\text{A}, I_C=0$
	BC547	6				
	BC548	6				
Collector Cutoff Current	BC546			0.1	$\mu\text{A}$	$V_{CB}=70\text{V}, I_E=0$
	BC547			0.1	$\mu\text{A}$	$V_{CB}=50\text{V}, I_E=0$
	BC548			0.1	$\mu\text{A}$	$V_{CB}=30\text{V}, I_E=0$
Collector Cutoff Current	BC546			0.1	$\mu\text{A}$	$V_{CE}=60\text{V}, I_B=0$
	BC547			0.1	$\mu\text{A}$	$V_{CE}=45\text{V}, I_B=0$
	BC548			0.1	$\mu\text{A}$	$V_{CE}=30\text{V}, I_B=0$
Emitter Cutoff Current	$I_{EBO}$			0.1	$\mu\text{A}$	$V_{EB}=5\text{V}, I_C=0$
DC Current Gain	$h_{FE}$	110		800		$V_{CE}=5\text{V}, I_C=2\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.3	V	$I_C=100\text{mA}, I_B=5\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1	V	$I_C=100\text{mA}, I_B=5\text{mA}$
Base-Emitter On Voltage	$V_{BE(on)}$	0.55		0.7	V	$V_{CE}=5\text{V}, I_C=2\text{mA}$
				0.77	V	$V_{CE}=5\text{V}, I_C=10\text{mA}$
Output Capacitance	$C_{ob}$		1.7	4.5	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$
Transition Frequency	$f_T$	150	300		MHz	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=100\text{MHz}$

Classification of  $h_{FE}$ 

Rank	A	B	C
Range	110-220	200-450	420-800

## Ordering Information

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 1k/Bag, 100K/Ctn;

Note : Adding "-HF" Suffix for Halogen Free, eg. Part Number-TP-HF

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