Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Micro Commercial Components

Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

BC546B
BC547A/B/C
BC548A/B/C

NPN Silicon
Amplifier Transistor
625mW

Features

- Through Hole Package
- 150°C Junction Temperature
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1
- Marking:Type Number
- Lead Free Finish/Rohs Compliant) ("P"Suffix designates Compliant. See ordering information)

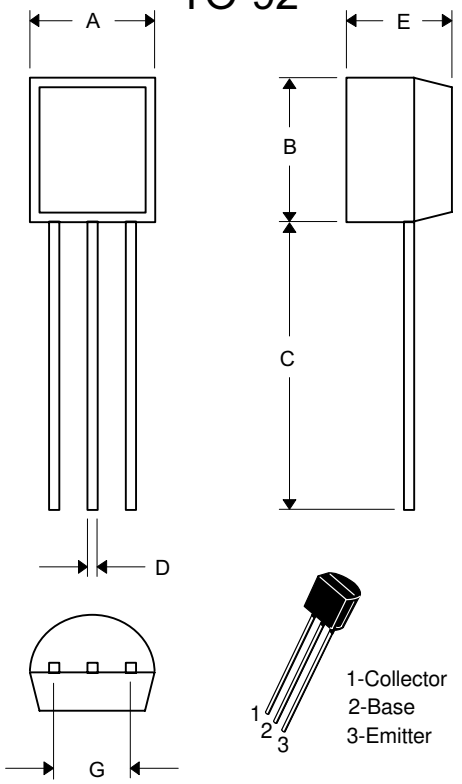
Mechanical Data

- Case: TO-92, Molded Plastic
- Polarity: indicated as below.

Maximum Ratings @ 25°C Unless Otherwise Specified

Charateristic		Symbol	Value	Unit
Collector-Emitter Voltage	BC546	V_{CEO}	65	V
	BC547		45	
	BC548		30	
Collector-Base Voltage	BC546	V_{CBO}	80	V
	BC547		50	
	BC548		30	
Emitter-Base Voltage		V_{EBO}	6.0	V
Collector Current(DC)		I_C	100	mA
Power Dissipation@T_A=25°C		P_d	625 5.0	mW mW/°C
Power Dissipation@T_C=25°C		P_d	1.5 12	W mW/°C
Thermal Resistance, Junction to Ambient Air		$R_{\theta JA}$	200	°C/W
Thermal Resistance, Junction to Case		$R_{\theta JC}$	83.3	°C/W
Operating & Storage Temperature		T_j, T_{STG}	-55~150	°C

TO-92



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.170	.190	4.33	4.83	
B	.170	.190	4.30	4.83	
C	.550	.590	13.97	14.97	
D	.010	.020	0.36	0.56	
E	.130	.160	3.30	3.96	
G	.096	.104	2.44	2.64	

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic		Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Collector–Emitter Breakdown Voltage (I_C = 1.0 mA, I_B = 0)	BC546 BC547 BC548	$V_{(BR)CEO}$	65 45 30	— — —	— — —	V
Collector–Base Breakdown Voltage (I_C = 100 μAdc)	BC546 BC547 BC548	$V_{(BR)CBO}$	80 50 30	— — —	— — —	V
Emitter–Base Breakdown Voltage (I_E = 10 μA, I_C = 0)	BC546 BC547 BC548	$V_{(BR)EBO}$	6.0 6.0 6.0	— — —	— — —	V
ON CHARACTERISTICS						
DC Current Gain		h_{FE}				—
(I_C = 10 μA, V_{CE} = 5.0 V)	BC547A/548A BC546B/547B/548B BC548C		— — —	90 150 270	— — —	
(I_C = 2.0 mA, V_{CE} = 5.0 V)	BC547A/548A BC546B/547B/548B BC547C/BC548C		110 200 420	180 290 520	220 450 800	
(I_C = 100 mA, V_{CE} = 5.0 V)	BC547A/548A BC546B/547B/548B BC548C		— — —	120 180 300	— — —	
Collector–Emitter Saturation Voltage (I_C = 100 mA, I_B = 5.0 mA)		$V_{CE(sat)}$	—	---	0.3	V
Base–Emitter Saturation Voltage (I_C = 100 mA, I_B = 5.0 mA)		$V_{BE(sat)}$	—	—	1.0	V
Base–Emitter On Voltage		$V_{BE(on)}$				V
(I_C = 2.0 mA, V_{CE} = 5.0 V)			0.55	—	0.7	
(I_C = 10 mA, V_{CE} = 5.0 V)			—	—	0.77	
SMALL–SIGNAL CHARACTERISTICS						
Current–Gain — Bandwidth Product		f_T				MHz
(I_C = 10 mA, V_{CE} = 5.0 V, f = 100 MHz)	BC546 BC547 BC548		150 150 150	300 300 300	— — —	
Output Capacitance (V_{CB} = 10 V, I_C = 0, f = 1.0 MHz)		C_{obo}	—	1.7	4.5	pF
Input Capacitance (V_{EB} = 0.5 V, I_C = 0, f = 1.0 MHz)		C_{ibo}	—	10	—	pF
Small–Signal Current Gain		h_{fe}				—
(I_C = 2.0 mA, V_{CE} = 5.0 V, f = 1.0 kHz)	BC547A/548A BC546B/547B/548B BC547C/548C		125 240 450	220 330 600	260 500 900	
Noise Figure		NF				dB
(I_C = 0.2 mA, V_{CE} = 5.0 V, R_S = 2 kΩ, f = 1.0 kHz, Δf = 200 Hz)	BC546 BC547 BC548		— — —	2.0 2.0 2.0	10 10 10	

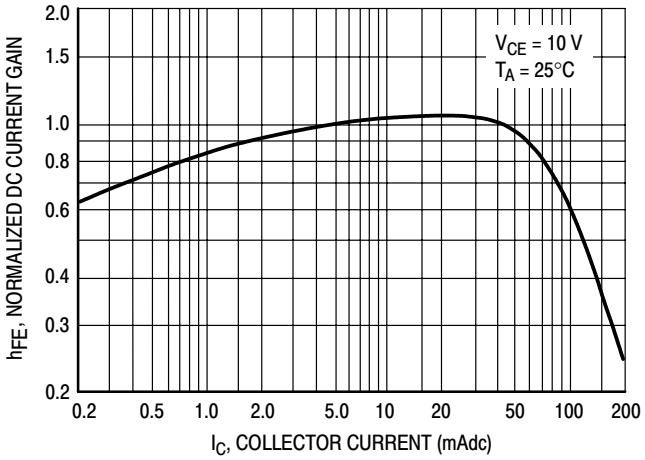


Figure 1. Normalized DC Current Gain

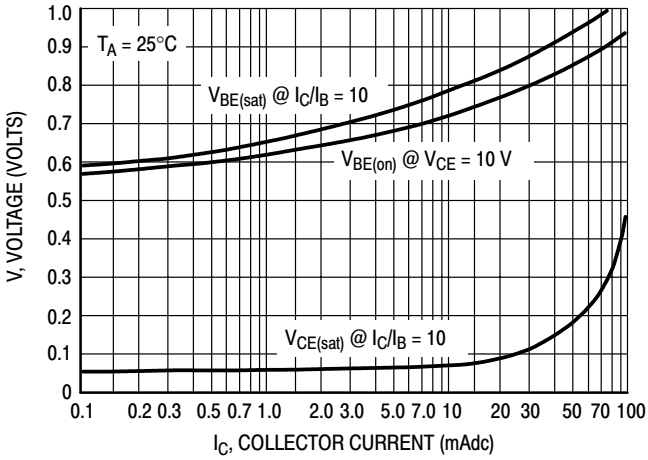


Figure 2. "Saturation" and "On" Voltages

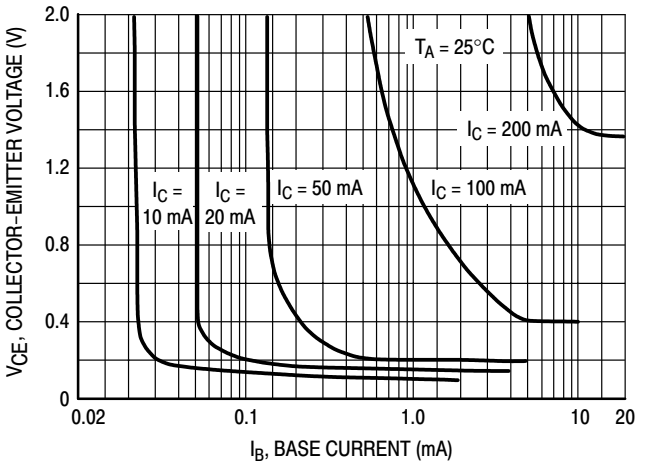


Figure 3. Collector Saturation Region

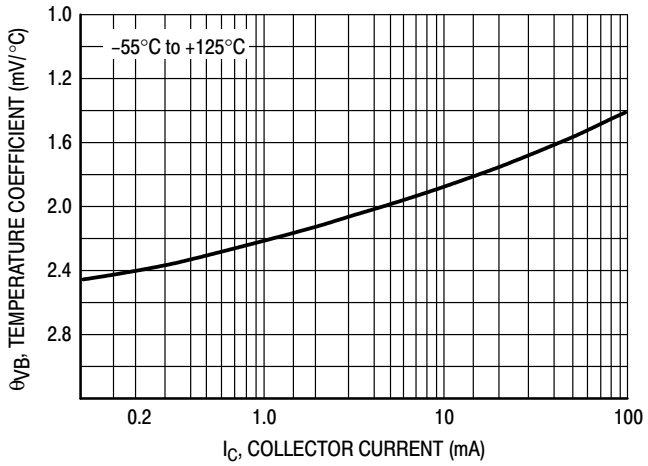


Figure 4. Base–Emitter Temperature Coefficient

BC547/BC548

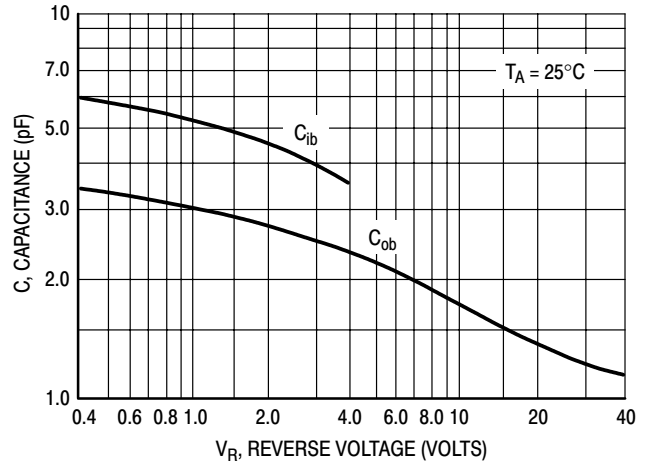


Figure 5. Capacitances

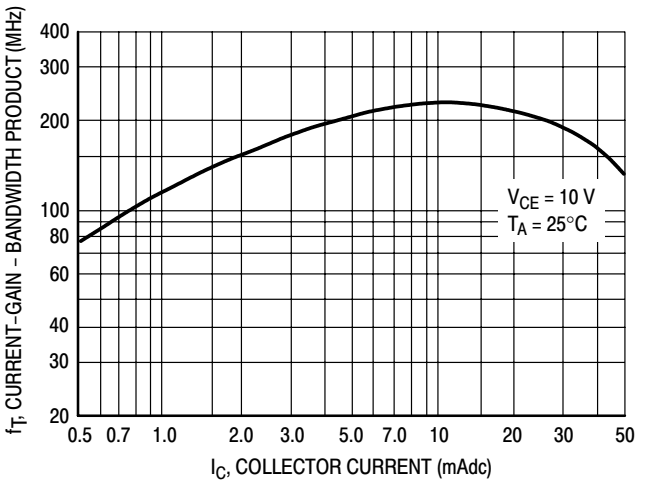


Figure 6. Current–Gain – Bandwidth Product

BC547/BC548

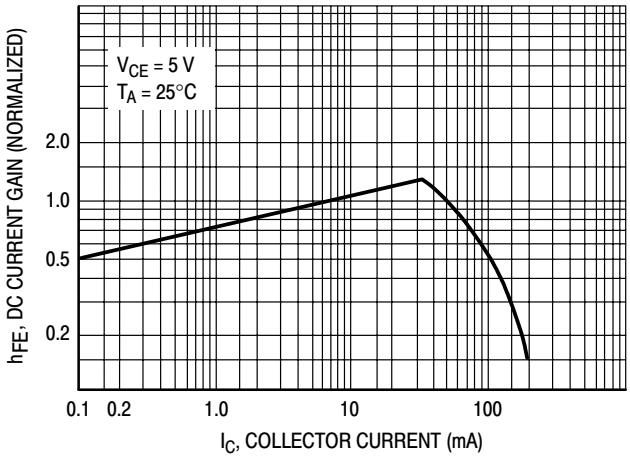


Figure 7. DC Current Gain

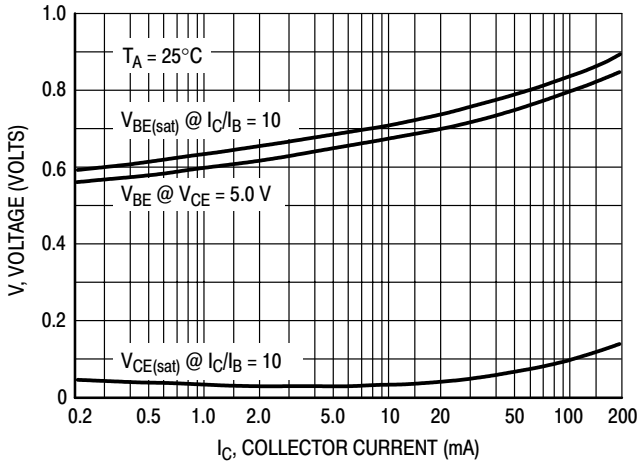


Figure 8. "On" Voltage

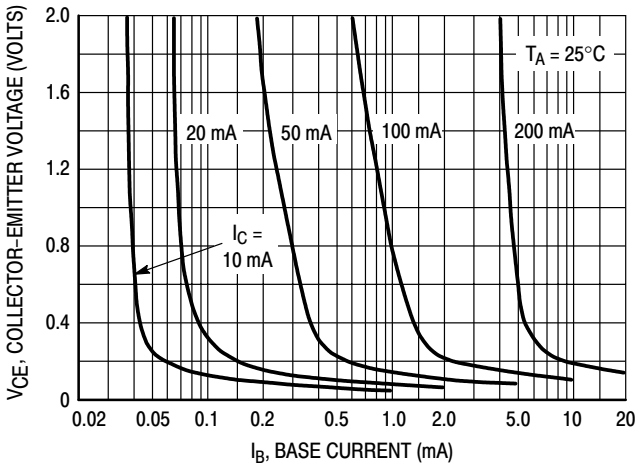


Figure 9. Collector Saturation Region

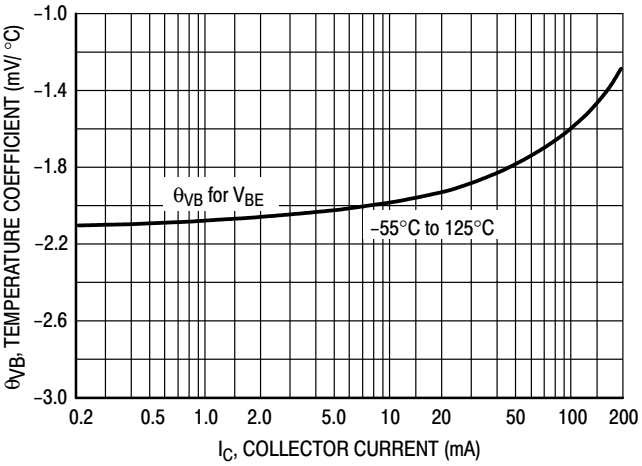


Figure 10. Base–Emitter Temperature Coefficient

BC546

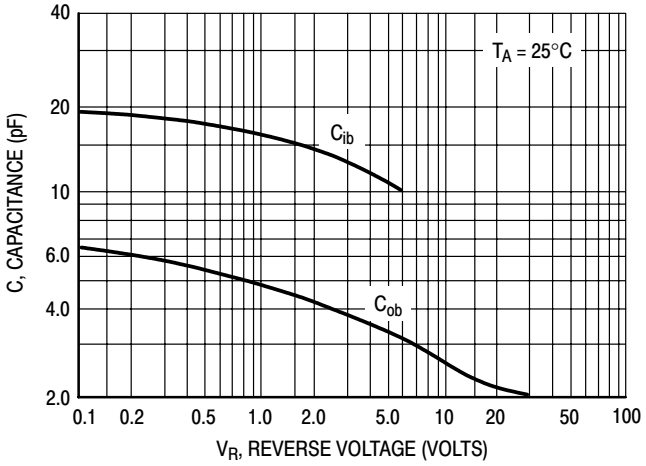


Figure 11. Capacitance

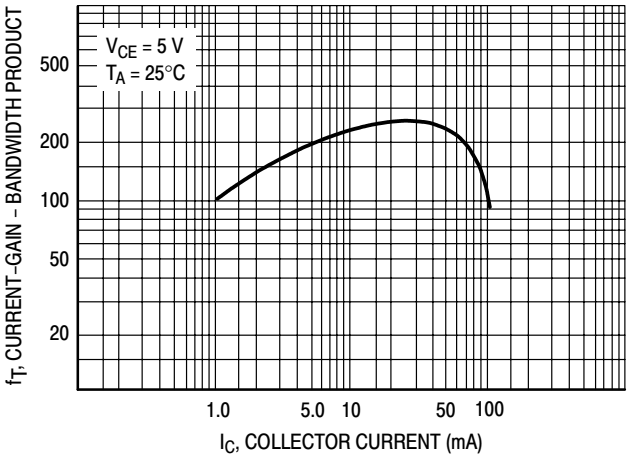


Figure 12. Current–Gain – Bandwidth Product

Micro Commercial Components

Ordering Information

Device	Packing
(Part Number)-AP	Ammo Packing;2Kpcs/AmmoBox
(Part Number)-BP	Bulk;1Kpcs/Bag

*****IMPORTANT NOTICE*****

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . *Micro Commercial Components Corp*. does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold *Micro Commercial Components Corp*. and all the companies whose products are represented on our website, harmless against all damages.

*****LIFE SUPPORT*****

MCC's products are not authorized for use as critical components in life support devices or systems without the expresse written approval of Micro Commercial Components Corporation.