

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES NPN Transistpr

TO-92

Power dissipation

P_{CM} : 0.625 W ($T_{amb}=25^{\circ}C$)

Collector current

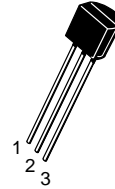
I_{CM} : 0.1 A

Collector-base voltage

V_{CBO} : BC546 80 V
BC547 50 V
BC548 30 V

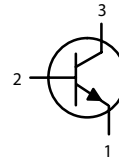
Operating and storage junction temperature range

T_J, T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$



1 2 3

1. COLLECTOR
2. BASE
3. EMITTER



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	BC546	$I_C = 100\mu A, I_E = 0$	80		V
	BC547		50		
	BC548		30		
Collector-emitter breakdown voltage	BC546	$I_C = 1mA, I_B = 0$	65		V
	BC547		45		
	BC548		30		
Emitter-base breakdown voltage	V_{EBO}	$I_E = 10\mu A, I_C = 0$	6		V
Collector cut-off current	BC546	$V_{CB} = 70V, I_E = 0$		0.1	μA
	BC547		$V_{CB} = 50V, I_E = 0$		
	BC548		$V_{CB} = 30V, I_E = 0$		
Collector cut-off current	BC546	$V_{CE} = 60V, I_B = 0$		0.1	μA
	BC547		$V_{CE} = 45V, I_B = 0$		
	BC548		$V_{CE} = 30V, I_B = 0$		
Emitter cut-off current	BC546 BC547 BC548	$V_{EB} = 5V, I_C = 0$		0.1	μA
DC current gain	BC546	$V_{CE} = 5V, I_C = 2mA$	110	800	
	BC547		110	800	
	BC548		110	800	
	BC547A/548A		110	220	
	BC546B/BC547B/BC548B BC546C/BC547C/BC548C		200	450	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100mA, I_B = 5mA$		0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100mA, I_B = 5mA$		1	V
Transition frequency	f_T	$V_{CE} = 5V, I_C = 10mA$ $f = 100MHz$	150		MHz

Any changing of specification will not be informed individual

Typical Characteristics

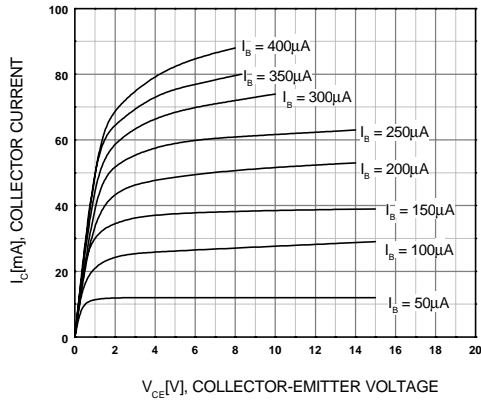


Figure 1. Static Characteristic

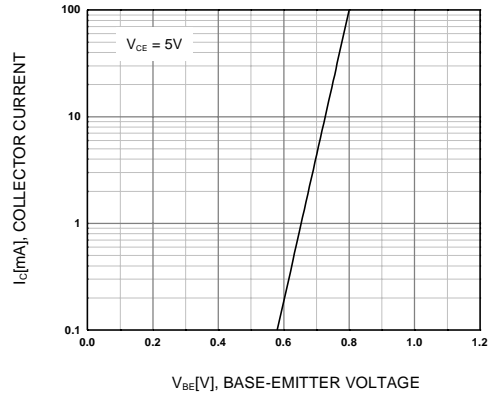


Figure 2. Transfer Characteristic

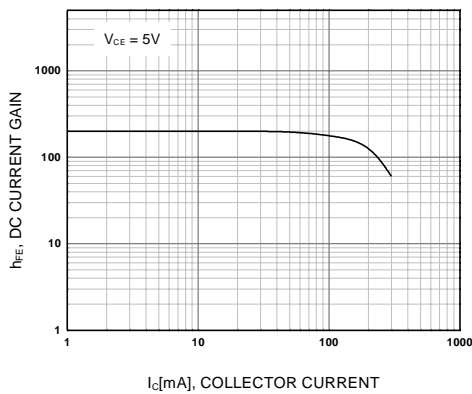
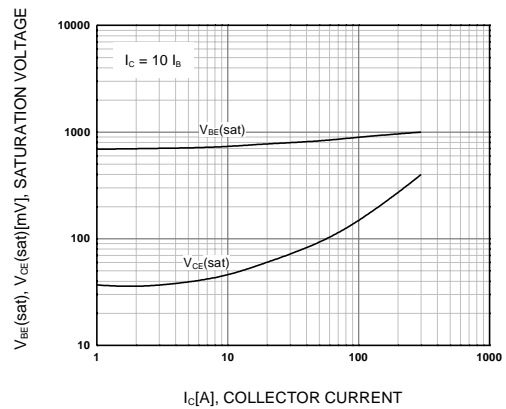


Figure 3. DC current Gain



**Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**

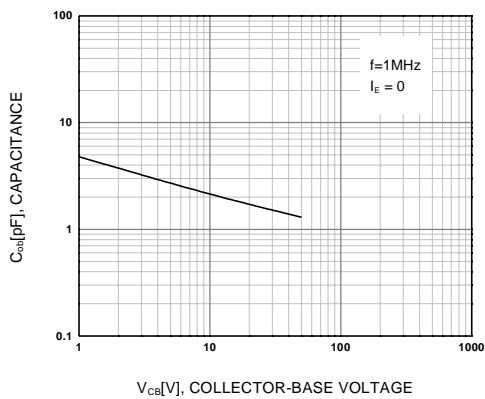


Figure 5. Output Capacitance

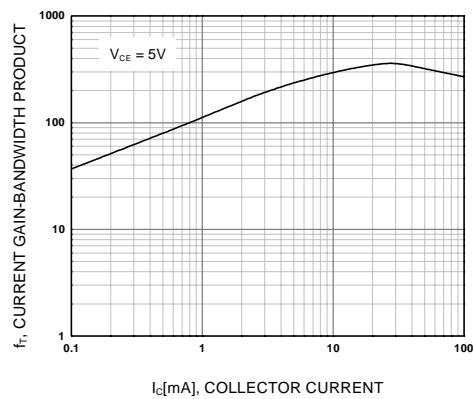
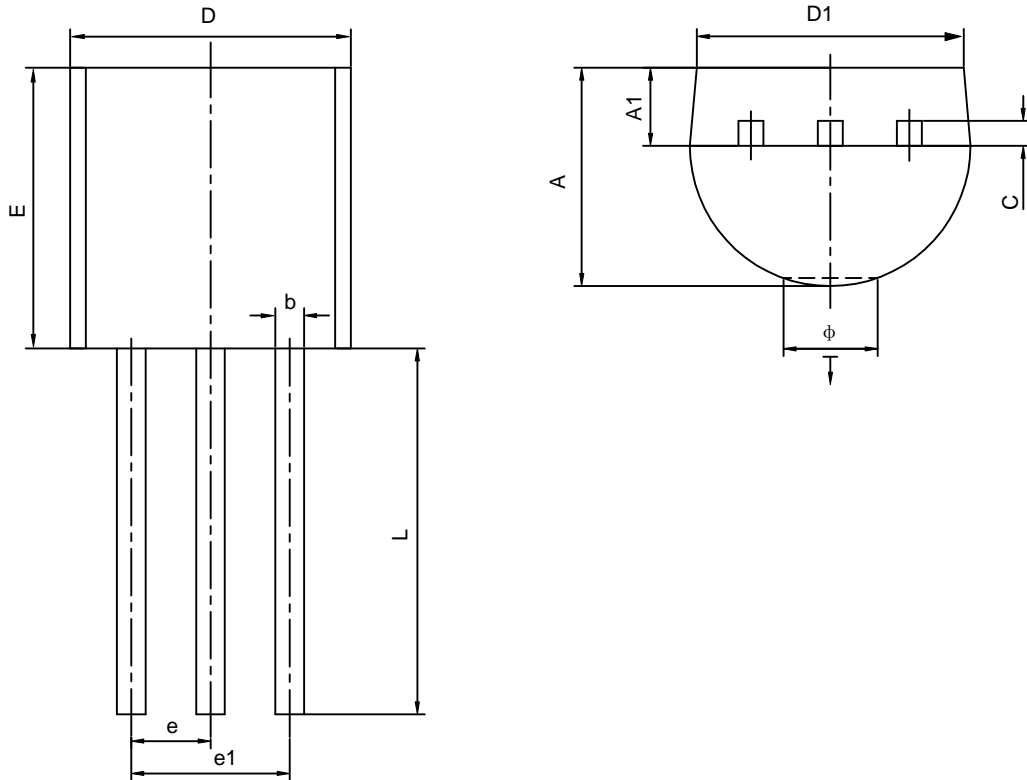


Figure 6. Current Gain Bandwidth Product

TO-92 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.400	4.700	0.173	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270TYP		0.050TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Ö		1.600		0.063
↓	0.000	0.380	0.000	0.015