

REPLACEMENT TYPE : BC546/BC547/BC548

FEATURES

- Low current
- High Voltage
- Complement to HCBC556/HCBC557/HCBC558



TO-92

1: COLLECTOR 2: BASE 3: EMITTER

MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Parameter		Symbol	Value	Unit
Collector-Base Voltage	BC546	V _{CBO}	80	V
	BC547		50	
	BC548		30	
Collector-Emitter Voltage	BC546	V _{CEO}	65	V
	BC547		45	
	BC548		30	
Emitter-Base Voltage	BC546	V _{EBO}	6	V
	BC547		6	V
	BC548		5	V
Collector Current-Continuous		I _C	0.1	A
Collector Power Dissipation		P _C	625	mW
Thermal Resistance from Junction to Ambient		R _{θJA}	200	°C/W
Junction Temperature		T _j	150	°C
Storage Temperature		T _{stg}	-55~+150	°C

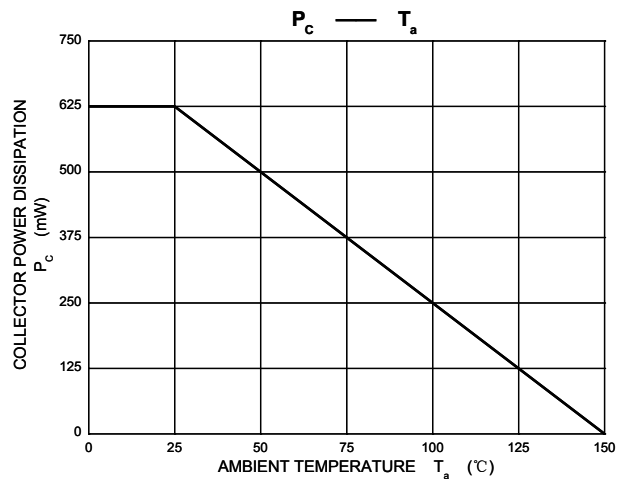
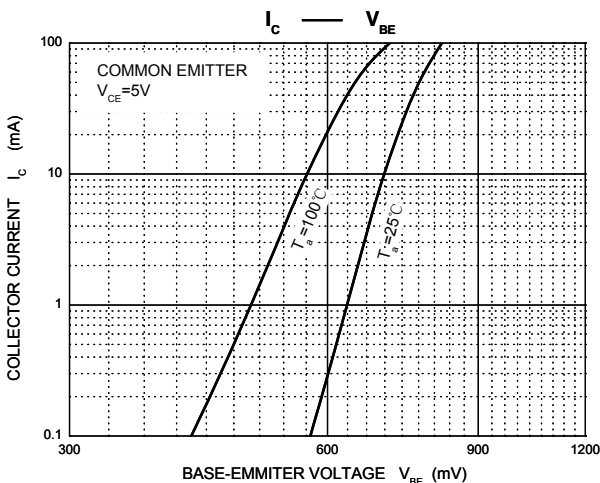
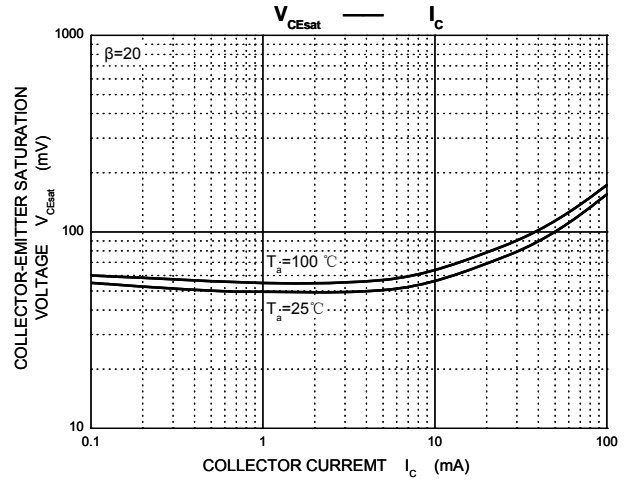
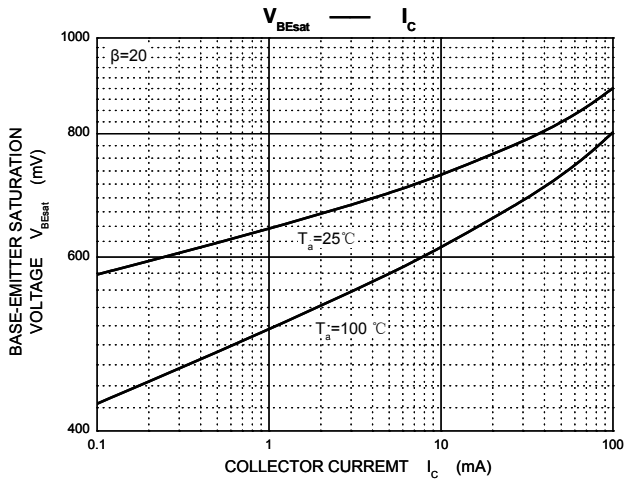
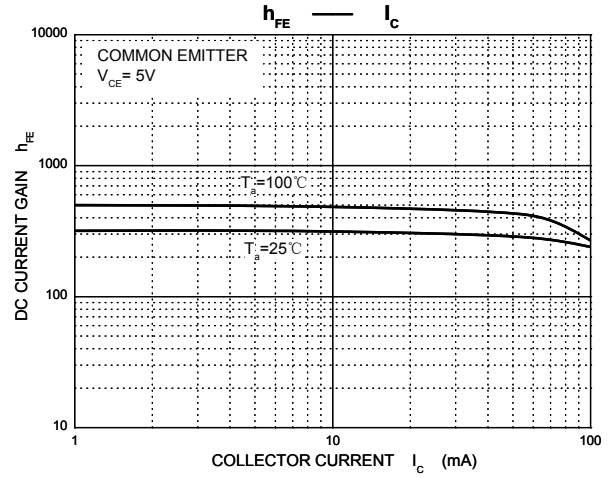
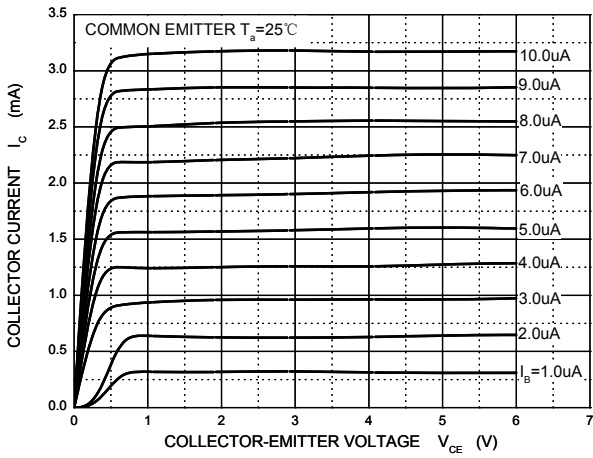
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BC546	I _C = 0.1mA, 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	BC546	I _E = 10μA, I _C = 0	6			V
	BC547		6			
	BC548		5			
Collector Cut-off Current	BC546	V _{CB} = 70V, I _E = 0			0.1	μA
	BC547	V _{CB} = 50V, I _E = 0			0.1	μA
	BC548	V _{CB} = 30V, I _E = 0			0.1	μA
Collector Cut-off Current	BC546	V _{CE} = 60V, I _B = 0			0.1	μA
	BC547	V _{CE} = 45V, I _B = 0			0.1	μA
	BC548	V _{CE} = 30V, I _B = 0			0.1	μA
Emitter Cut-off Current	I _{EBO}	V _E = 5V, I _C = 0			0.1	μA
DC Current Gain	h _{FE}	V _{CE} = 5V, I _C = 2mA	110		800	
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			1.1	V
Base-Emitter Voltage	V _{BE}	V _{CE} = 5V, I _C = 2mA	0.58		0.7	V
		V _{CE} = 5V, I _C = 10mA			0.75	V
Collector Output Capacitance	C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz			4.5	pF
Transition Frequency	f _T	V _{CE} = 5V, I _C = 10mA, f = 100MHz	150			MHz

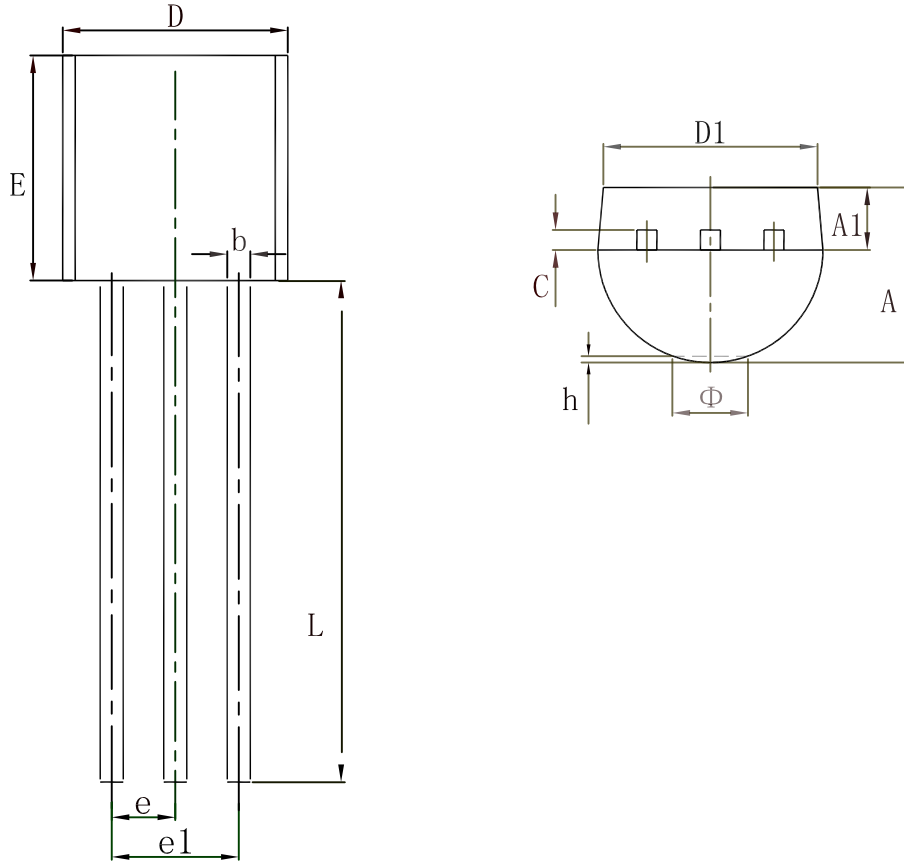
CLASSIFICATION OF h_{FE}

Rank	546A	547B	548C
Range	110-220	200-450	420-800

Typical Characteristics

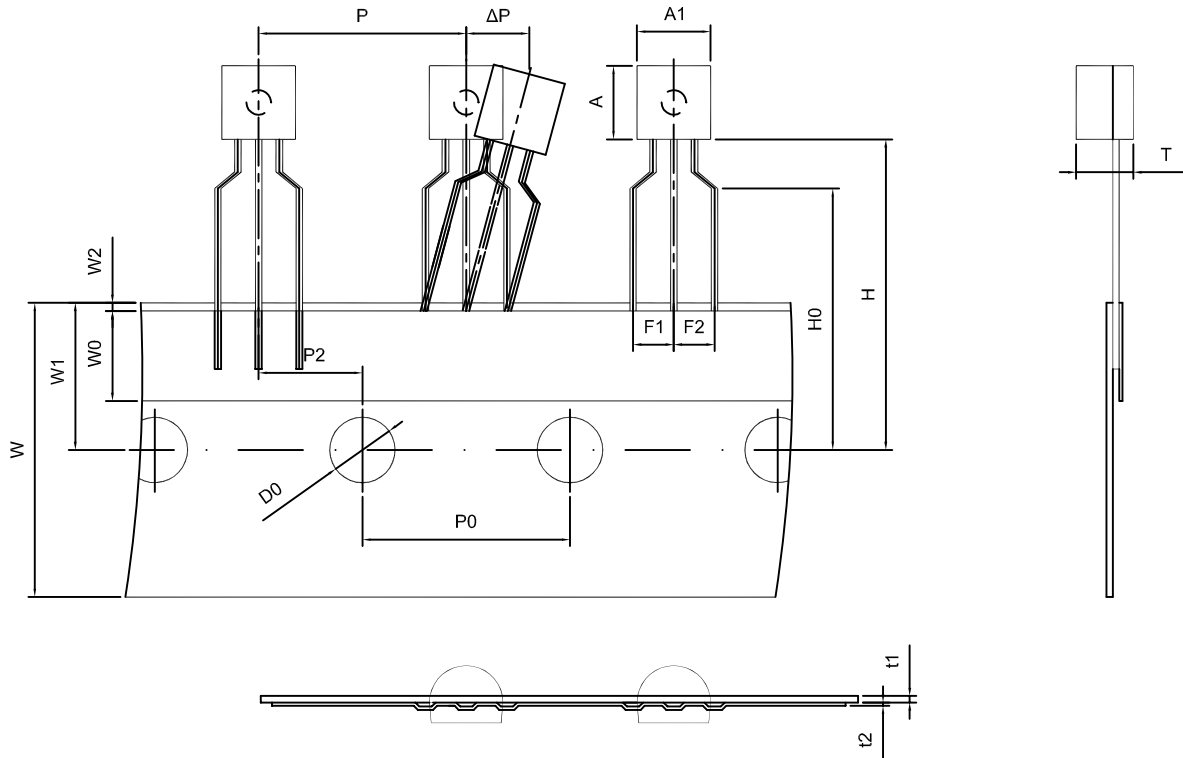


TO-92 Package Outline Dimensions



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	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP.		0.050 TYP.	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

TO-92 Package Taping Dimension



Dimensions are in millimeter

A1	A	T	P	P0	P2	F1	F2	W
4.5±0.2	4.5±0.2	3.5±0.2	12.7±0.3	12.7±0.2	6.35±0.3	2.5±0.3	2.5±0.3	18.0+1.0/-0.5
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0±0.5	9.0±0.5	1.0 MAX.	19.0±1.0	16.0±0.5	4.0±0.5	0.4±0.05	0.2±0.05	0 ± 1.0

