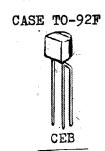


BC 546 through **BC 550**

NPN SILICON AF SMALL SIGNAL TRANSISTORS

THE BC546 THROUGH BC550 ARE NON SILICON PLANAR EPITAXIAL TRANSISTORS FOR USE IN AF SMALL SIGNAL AMPLIFIER STAGES AND DIRECT COUPLED CIRCUITS. THEY ARE COMPLEMENTARY TO BC556 THROUGH BC560.

THE BC549, BC550 ARE CHARACTERIZED BY LOW NOISE FIGURE.



ABSOLUTE MAXIMUM RATINGS		BC546	BC547	BC548	BC549	BC550		
Collector-Base Voltage	VCBO	80 v	50 v	30 v	30V	50 v		
Collector-Emitter Voltage (VBE=0)	VCES	80 v	50 v	30V	30 v	50 v		
Collector-Emitter Voltage (IB=O)	v_{CEO}	65 v	45 V	30 v	30 v	45 V		
Emitter-Base Voltage	v_{EBO}	6 v	6 v	5 v	5₹	5 v		
Collector Current	IC	C 100mA						
Collector Peak Current	ICM	200mA						
Total Power Dissipation (TA≤25°C)	P _{tot}	500mW derate 4mW/°C above 25°C						

Operating Junction & Storage Temperature Tj. Tstg

-55 to 150°C

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

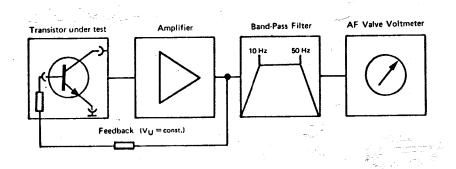
PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST-CONDITIONS		
Collector-Base Breakdown Voltage	BVCBO					Ic=10µA	IE=0	
BC546	020	80			v	•		
BC547		50			V			
BC548		30			A			
BC549		30 50			V			
BC550		50			v			
Collector-Emitter Breakdown Voltage	BVCES					Ic=10µA	$\mathbf{A}\mathbf{BE} = 0$	
BC546		80			V	•		
BC547		50		1	▼			
BC548		30 30			A A		,	
BC549					v			
BC550		50			V			
Collector-Emitter Breakdown Voltage	LVCEO					$I_{C}=2mA(F)$	ulsed)	
BC546		65			V	IB=0		
BC547		45			V		7%	
BC548		45 30 30			A A			
BC549 BC550		45			v	, 1		

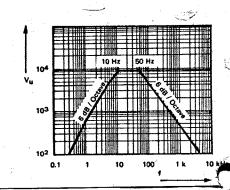
MICRO ELECTRONICS LTD.

38 HUNG TO ROAD, KWUN TONG, HONG KONG.
KWUN TONG P. O. BOX69477 CABLE ADDRESS
(TELEPHONE: 3-430181-6 -3-893363. FAX: 3-410321

	00111111		7			
PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Emitter-Base Breakdown Voltage BC546,547 BC548,549,550	BVEBO	6			v v	IE=1hW IC=0
Collector Cutoff Current	I _{CBO}	4		15	nA µA	V _{CB} =30V I _E =0 V _{CB} =30V I _E =0 T _A =150°C
Collector-Emitter Saturation Voltage	VCE(sat)		0.07	0.25	v	Ic=10mA IB=0.5mA Ic=100mA IB=5mA(Pulsed)
Collector-Emitter Knee Voltage	VCEK		0.3	0.6	V	Ic=10mA, IB=value at which Ic=11mA VcE=1V
Base-Emitter Saturation Voltage	VBE(sat)		0.7		V	Ic=10mA IB=0.5mA Ic=100mA IB=5mA(Pulsed)
Base-Emitter Voltage	V BE	0.58	0.63	0.7	V	IC=2mA VCE=5V IC=10mA VCE=5V
Current Gain-Bandwidth Product	fŢ		250		MHz	Ic=10mA VCE=5V
Collector-Base Capacitance	Сор		2.7	4.5	pF	VCB=10V IE=0 f=1MHz
Noise Figure BC546,547,548 BC549,550	NF		2	10	dB dB	IC=0.2mA VCE=5V RG=2K \(\Omega \) f=1kHz \(\Delta \) f=200Hz
Noise Figure BC549 only BC550 only	NF		1.2	4 3	dB dB	IC=0.2mA VCE=5V RG=2KA f=30Hz-15kHz
Flicker Noise Voltage Referred to Base BC549,550 only	En		J. (2)	0,135	μV	I _C =0.2mA V _C E=5V R _G =2KΩ f=10Hz-50Hz

FLICKER NOISE MEASUREMENT





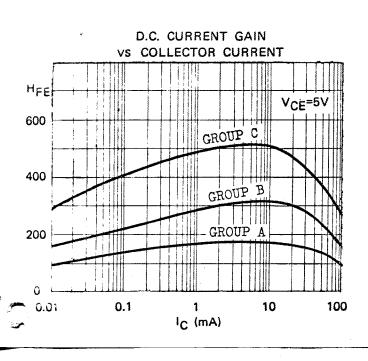
D.C. CURRENT GAIN (HFE) AT VCE=5V TA	[A=25°C
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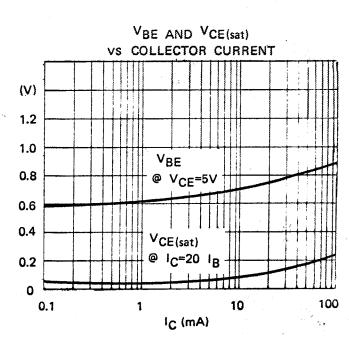
@ Ic	BC546, BC547 BC548	BC546, BC547 BC548 BC549, BC550	BC548 BC549, BC550		
	HFE GROUP A MIN TYP MAX	HFE GROUP B MIN TYP MAX	HFE GROUP C MIN TYP MAX		
O.OlmA	90	170	290		
2mA	110 170 220	200 300 450	420 520 800		
100mA	100	160	270		

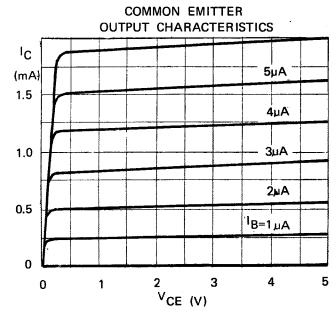
h - PARAMETERS AT IC=2mA VCE=5V f=1kHz TA=25°C

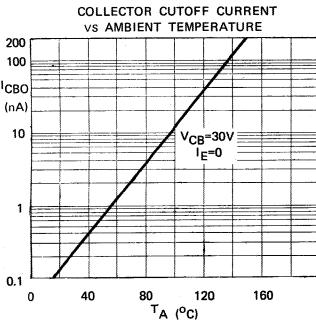
h - PARAMETER	SYMBOL	HFE GROUP A		HFE GROUP B			HFE GROUP C			UNIT	
		MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	XAM	,
Input Impedance	hie	1.6	2.7	4.5	3.2	4.5	8.5	6	8.7	15	Κυ
Voltage Feedback Ratio	hre		1.5			2			3		x10 ⁻⁴
Small Signal Current Gain	h _{fe}	125	190	260	240	330	500	450	580	900	
Output Admittance	hoe		18	30		30	60		60	110	μU

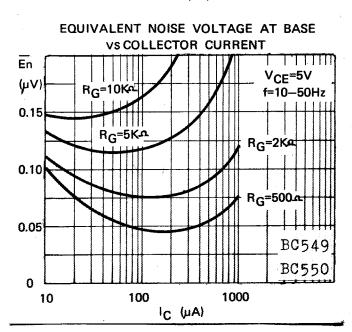
TYPICAL CHARACTERISTICS AT TA=25°C (Pulse Test)

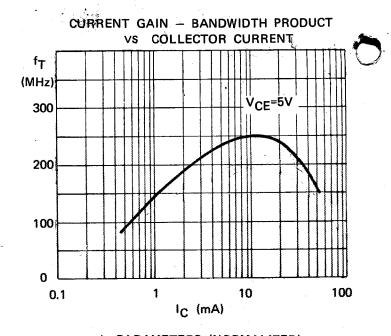


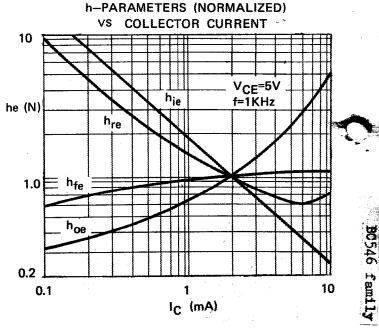


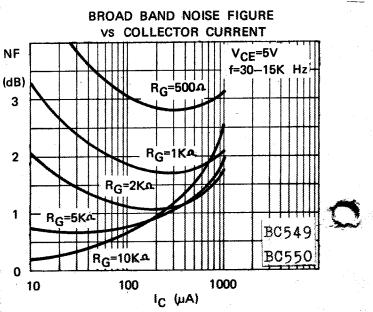












2.78.4300B/4500B

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Datasheets for electronics components.