

BC546/547/548/549/550

NPN EPITAXIAL SILICON TRANSISTOR

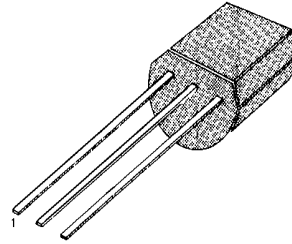
SWITCHING AND AMPLIFIER

- HIGH VOLTAGE: BC546, $V_{CE0}=65V$
- LOW NOISE: BC549, BC550
- Complement to BC556 ... BC560

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}C$)

Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V_{CBO}	80	V
: BC546		50	V
: BC547/550		30	V
Collector-Emitter Voltage	V_{CEO}	65	V
: BC546		45	V
: BC547/550		30	V
Emitter-Base Voltage	V_{EBO}	6	V
: BC546/547		5	V
: BC548/549/550			
Collector Current (DC)	I_C	100	mA
Collector Dissipation	P_C	500	mW
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-65 ~ 150	$^{\circ}C$

TO-92



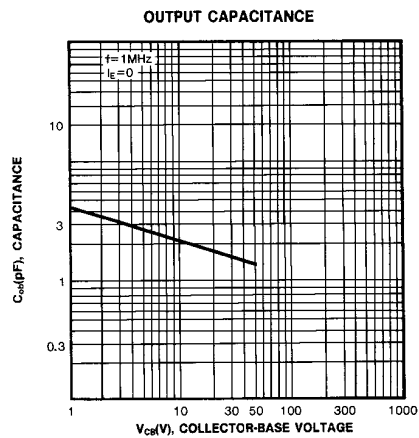
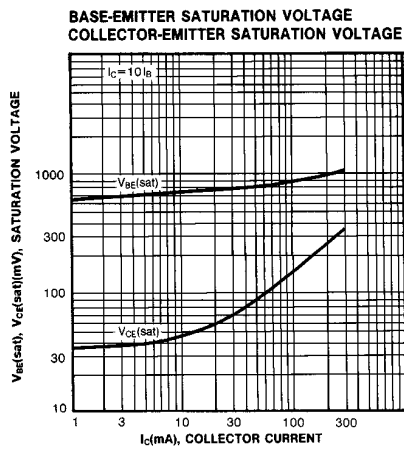
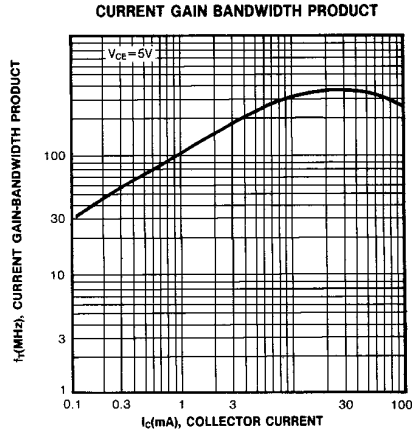
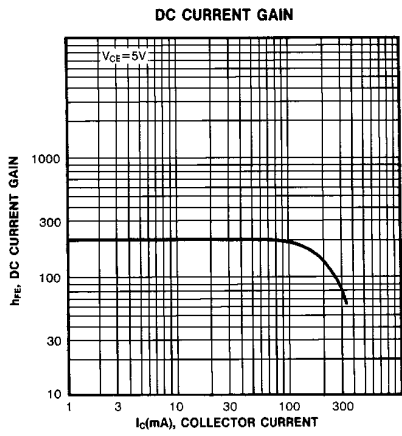
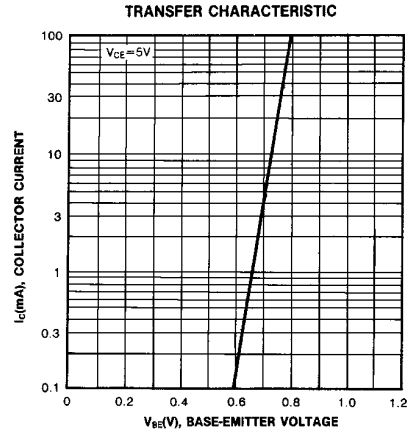
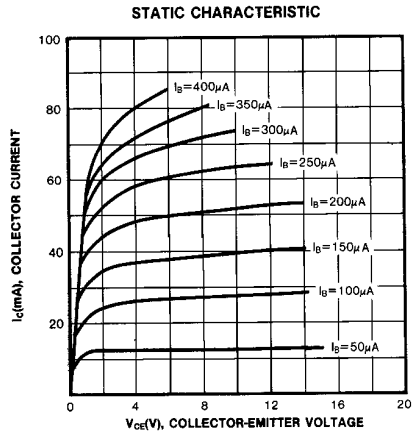
1. Collector 2. Base 3. Emitter

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}C$)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB}=30V, I_E=0$			15	nA
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=2mA$	110		800	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=0.5mA$ $I_C=100mA, I_B=5mA$		90 200	250 600	mA mA
Collector Base Saturation Voltage	$V_{BE(on)}$	$I_C=10mA, I_B=0.5mA$ $I_C=100mA, I_B=5mA$		700 900		mA mA
Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE}=5V, I_C=2mA$ $V_{CE}=5V, I_C=10mA$	580	660	700 720	mA mA
Current Gain Bandwidth Product	f_T	$V_{CE}=5V, I_C=10mA$		300		MHz
Collector Base Capacitance	C_{CBO}	$V_{CB}=10V, f=1MHz$		3.5	6	pF
Emitter Base Capacitance	C_{EBO}	$V_{EB}=0.5V, f=1MHz$		9		pF
Noise Figure	NF	$V_{CE}=5V, I_C=200\mu A$ $f=1KHz, R_G=2K\Omega$		2	10	dB
: BC546/547/548				1.2	4	dB
: BC549/550		$V_{CE}=5V, I_C=200\mu A$ $R_G=2K\Omega, f=30\sim 15000MHz$		1.4	4	dB
: BC549				1.4	3	dB
: BC550						

h_{FE} CLASSIFICATION

Classification	A	B	C
h_{FE}	110-220	200-450	420-800



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