BC546,BC547,BC548 SERIES

NPN GENERAL PURPOSE TRANSISTOR

VOLTAGE 30V/45V/65V **POWER** 625 mWatts

FEATURES

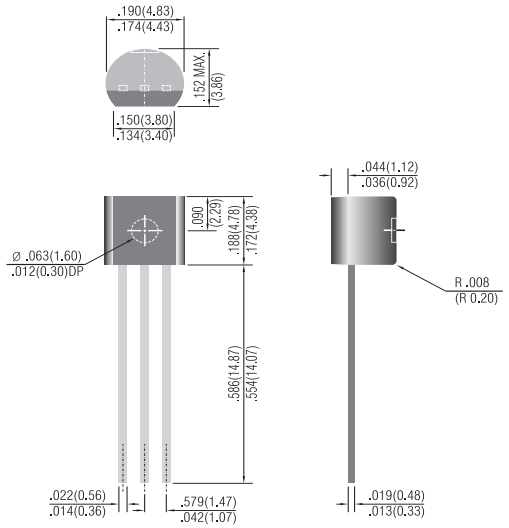
- NPN epitaxial silicon, planar design
- Collector current I_C = 100mA
- Complimentary (PNP) device:BC556,BC557,BC558 Series
- Pb free product :99% Sn above can meet RoHS environment substance directive request

MECHANICAL DATA

- Case: TO-92
- Terminals: Solderable per MIL-STD-202, Method 208
- Approx Weight : 0.02grams
- Device Marking :

BC546A=546A	BC546B=546B	-
BC547A=547A	BC547B=547B	BC547C=547C
BC548A=548A	BC548B=548B	BC548C=548C

TO-92 Unit: inch (mm)



ABSOLUTE MAXIMUM RATINGS

PARAMETER		Symbol	Value	Units
Collector - Emitter Voltage	BC546 BC547 BC548	V_{CEO}	65 45 30	V
Collector - Base Voltage	BC546 BC547 BC548	V_{CBO}	80 50 30	V
Emitter - Base Voltage	BC546 BC547 BC548	V_{EBO}	6.0 6.0 5.0	V
Collector Current - Continuous		I_C	100	mA
Max Power Dissipation		P_{TOT}	625	mW
Storage Temperature		T_{STG}	-55 to 150	°C
Junction Temperature		T_J	-55 to 150	°C

THERMAL CHARACTERISTICS

PARAMETER	Symbol	Value	Units
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	200	°C/W

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ELECTRICAL CHARACTERISTICS (T_J=25°C, unless otherwise noted)

PARAMETER		Symbol	MIN.	TYP.	MAX.	Units
Collector - Emitter Breakdown Voltage (I_C=10mA, I_B=0)	BC546A,B BC547A,B,C BC548A,B,C	$V_{(BR)}CEO$	65 45 30	-	-	V
Collector - Base Breakdown Voltage (I_C=10uA, I_E=0)	BC546A,B BC547A,B,C BC548A,B,C	$V_{(BR)}CBO$	80 50 30	-	-	V
Emitter - Base Breakdown Voltage (I_E=10uA, I_C=0)	BC546A,B BC547A,B,C BC548A,B,C	$V_{(BR)}EBO$	6.0 6.0 5.0	-	-	V
Emitter-Base Cutoff Current (V_{EB}=5V)		I_{EBO}	-	-	100	nA
Collector-Base Cutoff Current(V_{CB}=30V,I_E=0)	 T_J=150°C	I_{CBO}	- -	- -	15 5.0	nA uA
DC Current Gain (I_C=10uA, V_{CE}=5V)	BC546A,B BC547A,B,C BC548A,B,C	h_{FE}	- - -	90 150 270	- - -	-
(I_C=2.0mA, V_{CE}=5V)	BC546A,B BC547A,B,C BC548A,B,C		110 200 420	180 290 520	220 450 800	
Collector - Emitter Saturation Voltage	(I_C=10mA,I_B=0.5mA) (I_C=100mA,I_B=5.0mA)	$V_{CE(SAT)}$	- -	- -	0.25 0.6	V
Base - Emitter Saturation Voltage	(I_C=10mA,I_B=0.5mA) (I_C=100mA,I_B=5.0mA)	$V_{BE(SAT)}$	- -	0.7 0.9	- -	V
Base - Emitter Voltage	(I_C=2mA V_{CE}=0.5mA) (I_C=10mA,V_{CE}=5.0mA)	$V_{BE(SAT)}$	0.58 -	0.660 -	0.70 0.77	V
Collector - Base Capacitance	(V_{CB}=10V,I_E=0,f=1MH$_Z$)	C_{CBO}	-	-	4.5	pF

LEGAL STATEMENT

BC546,BC547,BC548 SERIES

ELECTRICAL CHARACTERISTICS CURVE BC546A,BC547A,BC548A ONLY

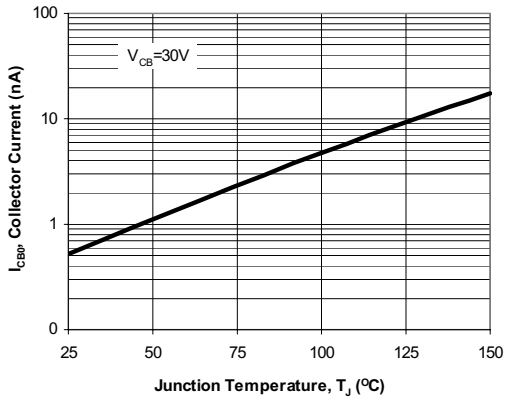

Fig. 1. Typical I_{CB0} vs.

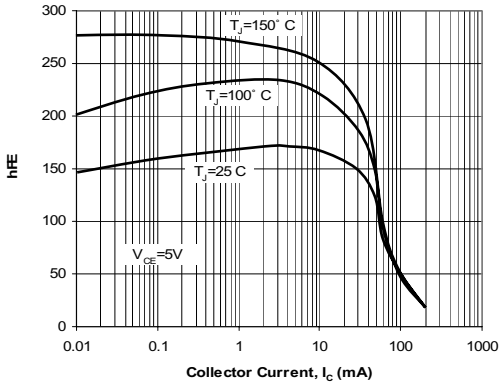

Fig. 2. Typical h_{FE} vs.

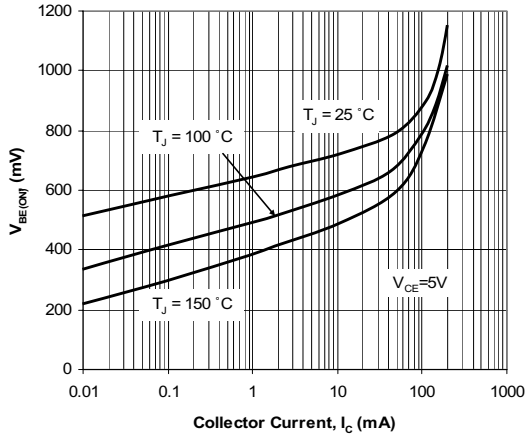

Fig. 3. Typical $V_{BE(ON)}$ vs.

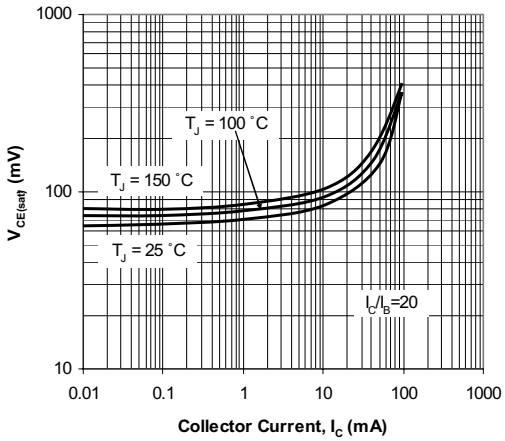

Fig. 4. Typical $V_{CE(SAT)}$ vs.

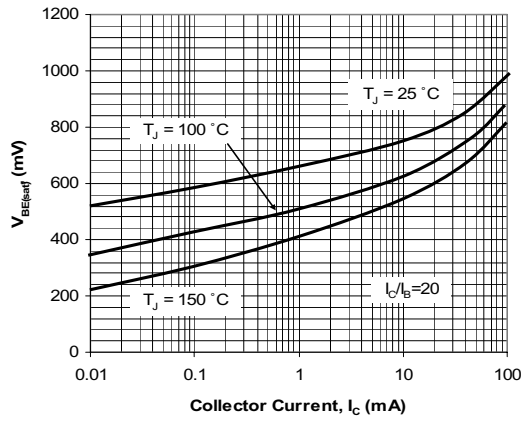

Fig. 5. Typical $V_{BE(SAT)}$ vs.

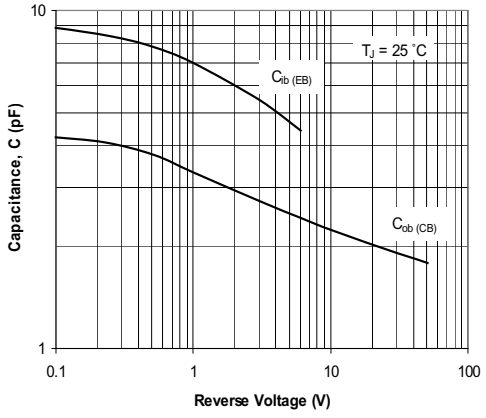

Fig. 6. Typical Capacitances vs.

BC546,BC547,BC548 SERIES

ELECTRICAL CHARACTERISTICS CURVE BC546B,BC547B,BC548B ONLY

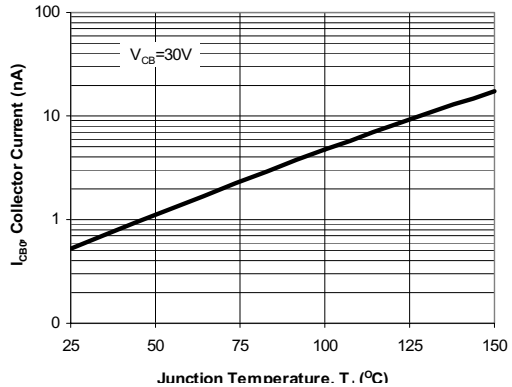

Fig. 1. Typical I_{CB0} vs. Junction Temperature

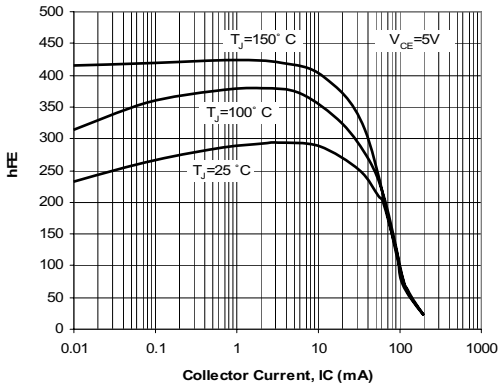

Fig. 2. Typical h_{FE} vs. Collector Current

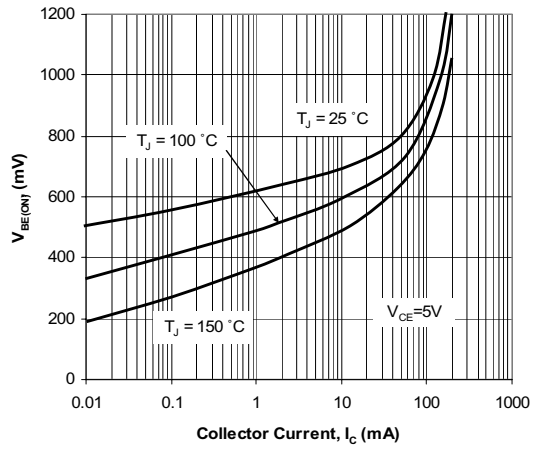

Fig. 3. Typical $V_{BE(ON)}$ vs. Collector Current

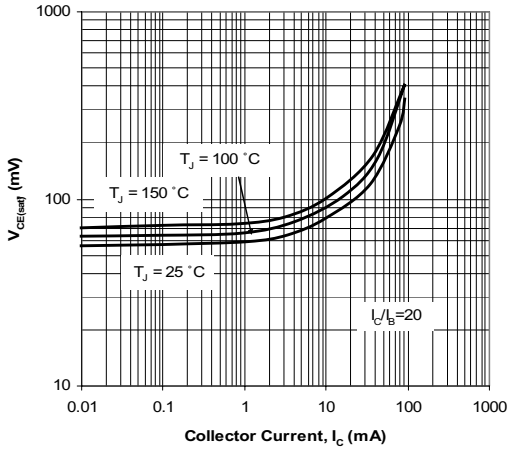

Fig. 4. Typical $V_{CE(SAT)}$ vs. Collector Current

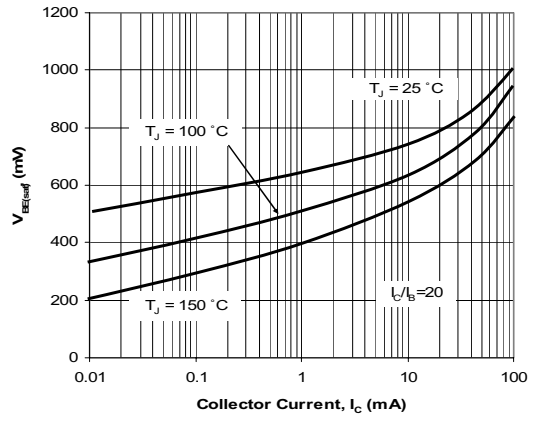

Fig. 5. Typical $V_{BE(SAT)}$ vs. Collector Current

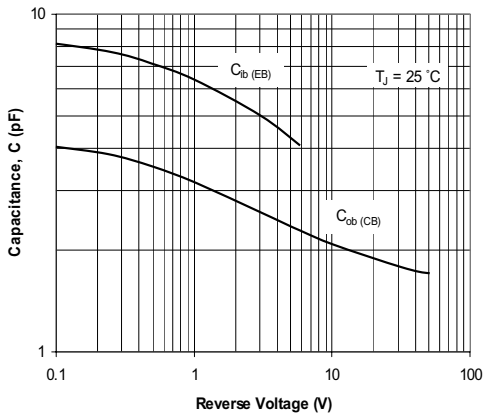

Fig. 6. Typical Capacitances vs. Reverse Voltage

BC546,BC547,BC548 SERIES

ELECTRICAL CHARACTERISTICS CURVE BC547C,BC548C ONLY

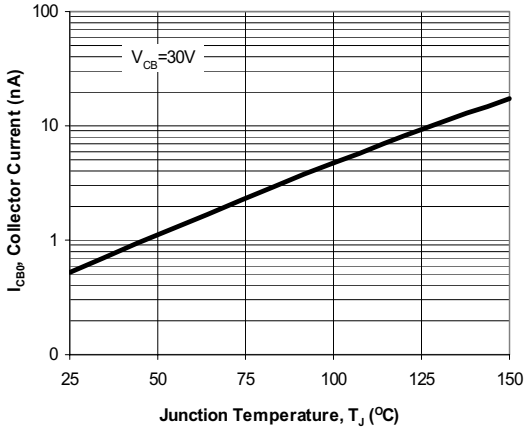

Fig. 1. Typical I_{CB0} vs. Junction

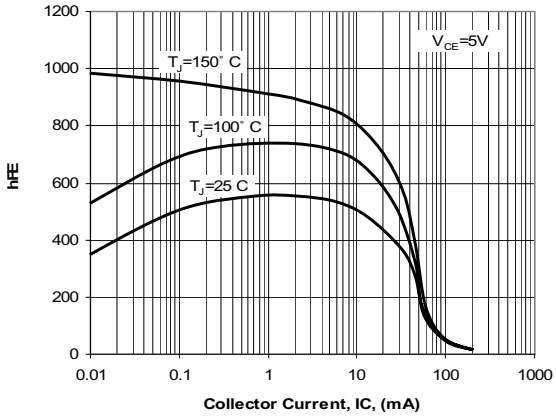

Fig. 2. Typical h_{FE} vs. Collector

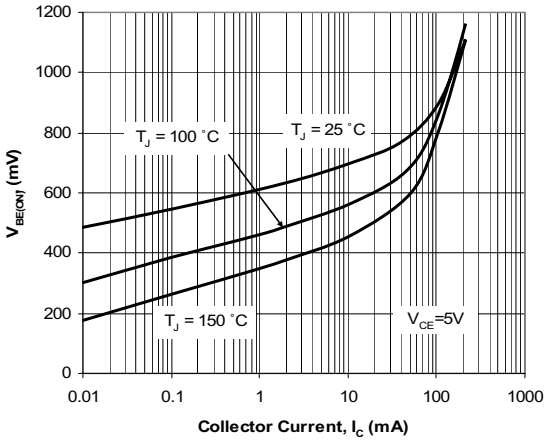

Fig. 3. Typical $V_{BE(ON)}$ vs. Collector Current

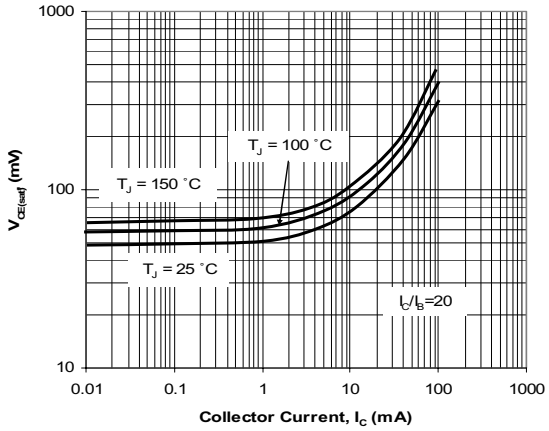

Fig. 4. Typical $V_{CE(SAT)}$ vs. Collector

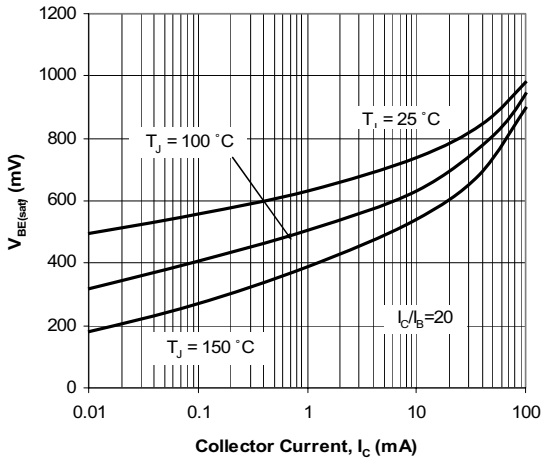

Fig. 5. Typical $V_{BE(SAT)}$ vs. Collector

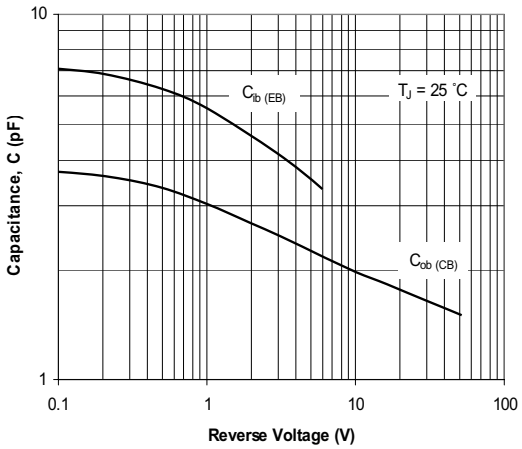

Fig. 6. Typical Capacitances vs. Reverse