

GBC558

PNP SILICON TRANSISTOR

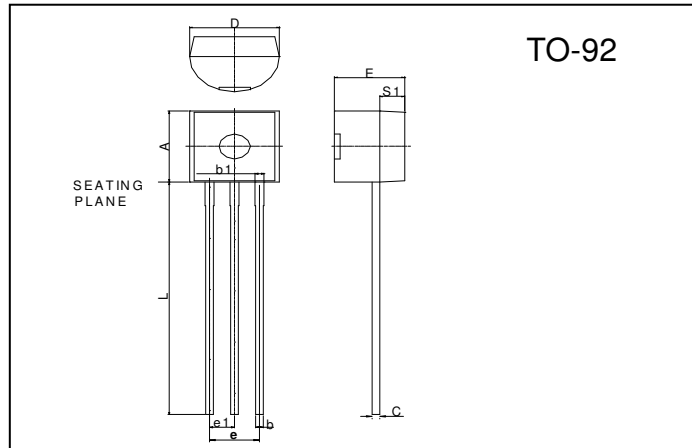
Description

The GBC558 is designed for drive and output-stages of audio amplifiers.

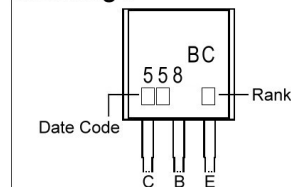
Features

- High DC Current Gain: 120~800 @ $V_{CE} = -5V$, $I_C = -2mA$
- Complementary to GBC548

Package Dimensions



Marking :



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.45	4.7	D	4.44	4.7
S1	1.02	-	E	3.30	3.81
b	0.36	0.51	L	12.70	-
b1	0.36	0.76	e1	1.150	1.390
C	0.36	0.51	e	2.42	2.66

Absolute Maximum Ratings ($T_A = 25^\circ C$)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	-30	V
Collector to Emitter Voltage	V_{CEO}	-30	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current (continuous)	I_C	-100	mA
Total Device Dissipation @ $T_A = 25^\circ C$ Derate above $25^\circ C$	P_D	625 5.0	mW mW/ $^\circ C$
Total Device Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$	P_D	1.5 12	W mW/ $^\circ C$
Operating and Storage Junction Temperature	T_J, T_{stg}	-55 ~ +150	$^\circ C$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	200	$^\circ C/W$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	83.3	$^\circ C/W$

Electrical Characteristics ($T_A = 25^\circ C$ unless otherwise noted)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	-30	-	-	V	$I_C = -100\mu A$, $I_E = 0$
BV_{CEO}	-30	-	-	V	$I_C = -2mA$, $I_B = 0$
BV_{EBO}	-5	-	-	V	$I_E = -100\mu A$, $I_C = 0$
I_{CES}	-	-	-100	nA	$V_{CE} = -20V$, $V_{BE} = 0$
* $V_{CE(sat)1}$	-	-0.075	-0.3	V	$I_C = -10mA$, $I_B = -0.5mA$
* $V_{CE(sat)2}$	-	-0.25	-0.65	V	$I_C = -100mA$, $I_B = -5mA$
* $V_{BE(sat)1}$	-	-0.7	-	V	$I_C = -10mA$, $I_B = -0.5mA$
* $V_{BE(sat)2}$	-	-1.0	-	V	$I_C = -100mA$, $I_B = -5mA$
* $V_{BE(on)1}$	-0.55	-0.62	-0.7	V	$V_{CE} = -5V$, $I_C = -2mA$
* $V_{BE(on)2}$	-	-0.7	-0.82	V	$V_{CE} = -5V$, $I_C = -10mA$
* h_{FE}	120	-	800		$V_{CE} = -5V$, $I_C = -2mA$
f_T	-	360	-	MHz	$V_{CE} = -5V$, $I_C = -10mA$, $f = 100MHz$
C_{ob}	-	3.0	6.0	pF	$V_{CB} = -10V$, $I_C = 0$, $f = 1MHz$

*Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$

Classification Of h_{FE}

Rank	A	B	C
Range	120 ~ 220	180 ~ 460	420 ~ 800

Characteristics Curve

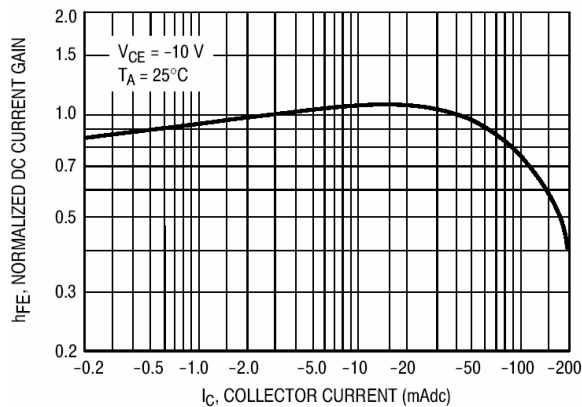


Fig 1. DC Current Gain

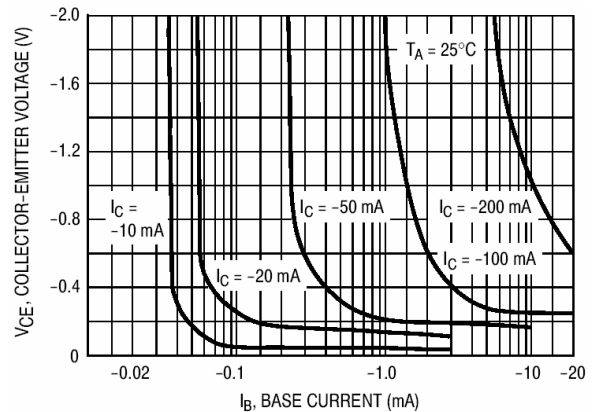


Fig 2. Collector Saturation Region

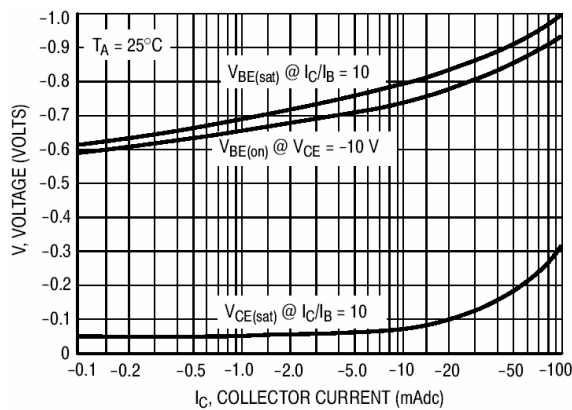


Fig 3. "Saturation" & "On" Voltages

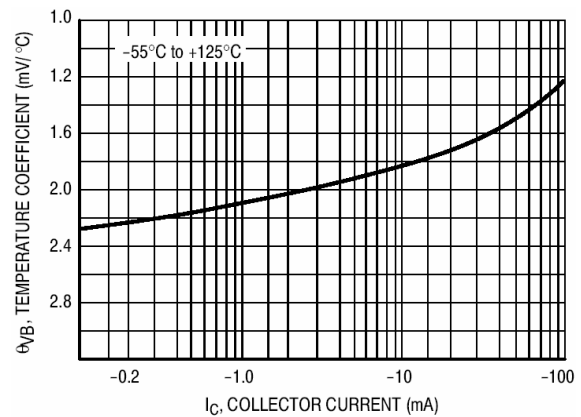


Fig 4. Temperature Coefficients

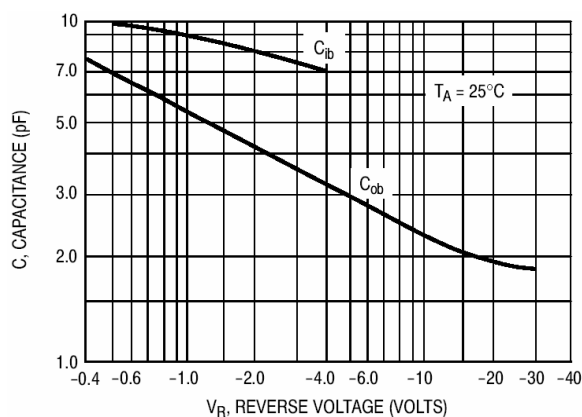


Fig 5. Capacitances

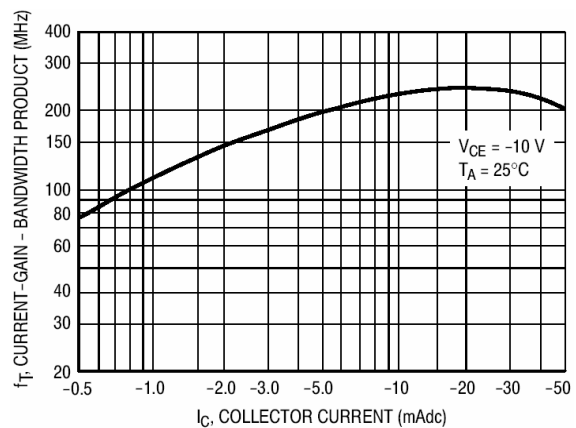


Fig 6. Bandwidth Product

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