GBC548

NPN SILICON TRANSISTOR

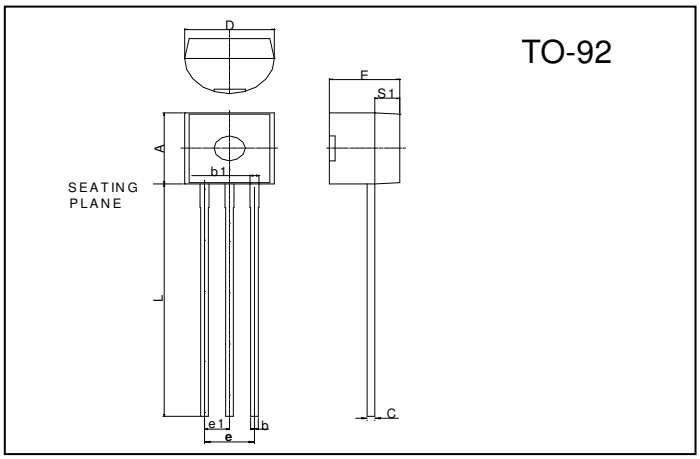
Description

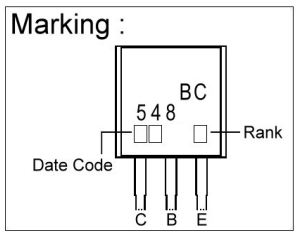
The GBC548 is designed for drive and output-stages of audio amplifiers.

Features

- High DC Current Gain: 110~800 @V_{CE}=5V, I_C=2mA
- Complementary to GBC558

Package Dimensions





REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.45	4.7	D	4.44	4.7
S_1	1.02	-	E	3.30	3.81
b	0.36	0.51	L	12.70	-
b_1	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℃)

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}	6	V
Collector Current (continuous)	I_C	100	mA
Total Device Dissipation @ T_A =25℃ Derate above 25℃	P_D	625 5.0	mW mW/℃
Total Device Dissipation @ T_C =25℃ Derate above 25℃	P_D	1.5 12	W mW/℃
Operating and Storage Junction Temperature	T_J, T_{stg}	-55 ~ +150	℃
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	200	℃/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	83.3	℃/W

Electrical Characteristics (T_A = 25℃ unless otherwise noted)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	30	-	-	V	I_C=100uA, I_E=0
BV_{CEO}	30	-	-	V	I_C=1mA, I_B=0
BV_{EBO}	6	-	-	V	I_E=10uA, I_C=0
I_{CES}	-	-	15	nA	V_{CE}=35V, V_{BE}=0
*$V_{CE(sat)}$1	-	0.09	0.25	V	I_C=10mA, I_B=0.5mA
*$V_{CE(sat)}$2	-	0.2	0.6	V	I_C=100mA, I_B=5mA
*$V_{BE(sat)}$	-	0.7	-	V	I_C=10mA, I_B=0.5mA
*$V_{BE(on)}$1	0.55	-	0.7	V	V_{CE}=5V, I_C=2mA
*$V_{BE(on)}$2	-	-	0.77	V	V_{CE}=5V, I_C=10mA
*h_{FE}	110	-	800		V_{CE}=5V, I_C=2mA
fT	150	300	-	MHz	V_{CE}=5V, I_C=10mA, f=100MHz
Cob	-	1.7	4.5	pF	V_{CB}=10V, I_C=0, f=1MHz

*Pulse Test: Pulse Width≦380μs, Duty Cycle≦2%

Classification Of h_{FE}

Rank	A	B	C
Range	110 ~ 220	200 ~ 450	420 ~ 800

Characteristics Curve

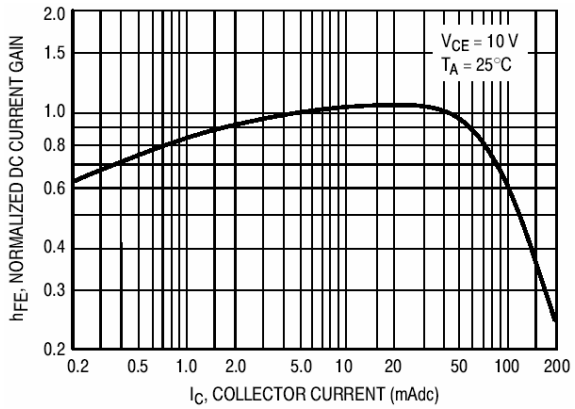


Fig 1. DC Current Gain

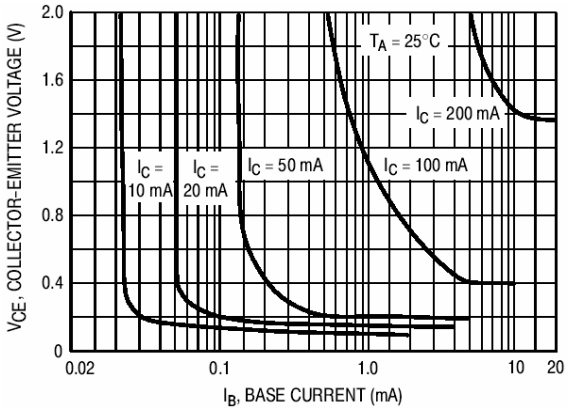


Fig 2. Collector Saturation Region

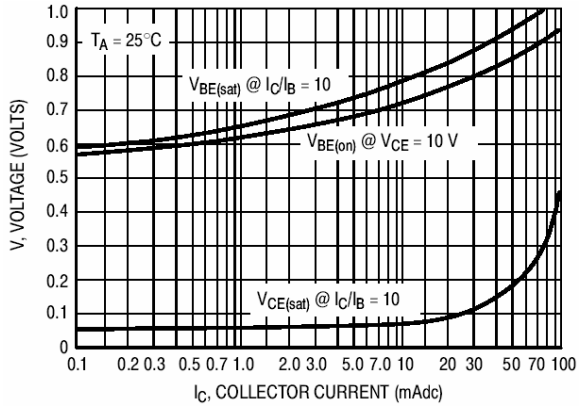


Fig 3. "Saturation" & "On" Voltages

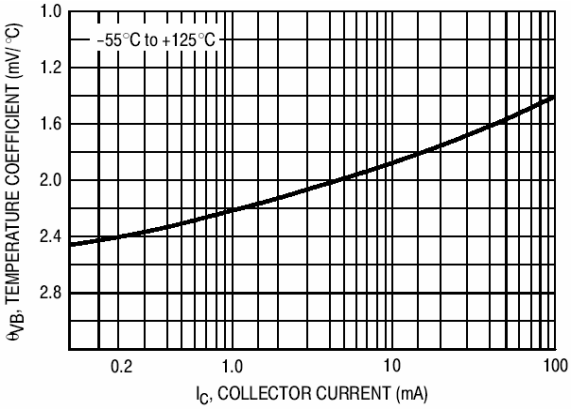


Fig 4. Temperature Coefficients

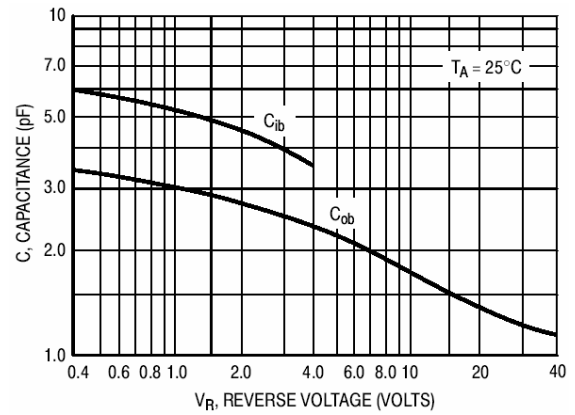


Fig 5. Capacitances

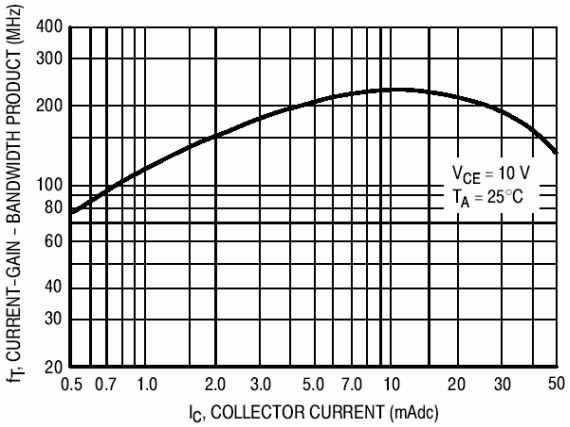


Fig 6. Bandwidth Product

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