

## GSD669A NPN EPITAXIAL PLANAR TRANSISTOR

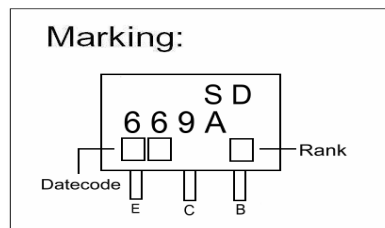
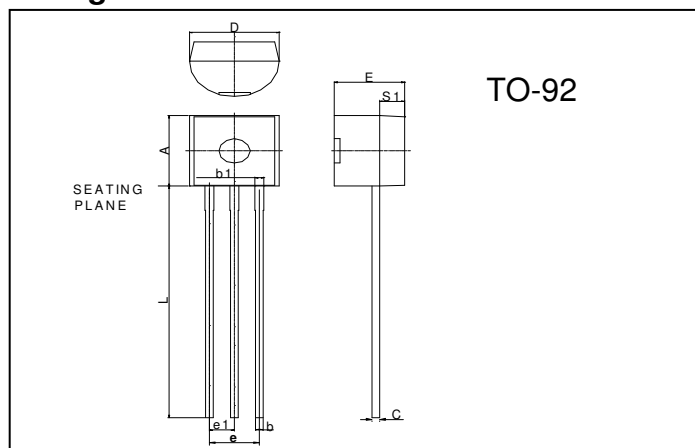
### Description

The GSD669A is designed for frequency power amplifier.

### Features

\*Low frequency power amplifier Complementary pair with GSB649A

### Package Dimensions



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 (Ta = 25°C, unless otherwise specified)

Parameter		Ratings	Unit
Collector to Base Voltage	V <sub>CBO</sub>	180	V
Collector to Emitter Voltage	V <sub>CEO</sub>	160	V
Emitter to Base Voltage	V <sub>EBO</sub>	5	V
Collect Current(DC)	I <sub>C</sub>	1.5	A
Collect Current*(Pulse)	I <sub>CP</sub>	3	A
Junction Temperature	T <sub>j</sub>	+150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ +150	°C
Total Power Dissipation (TC=25°C)	P <sub>D</sub>	1	W

### Electrical Characteristics (Ta = 25°C, unless otherwise specified)

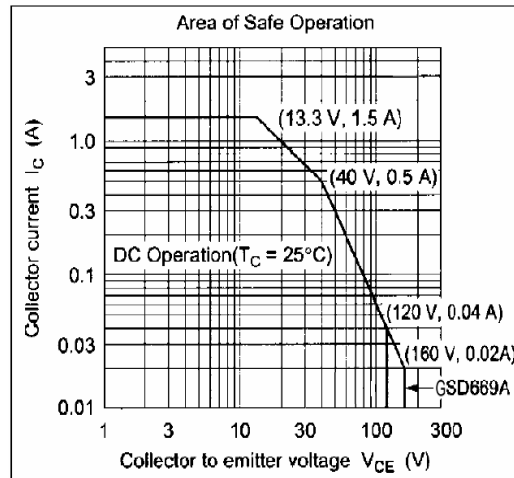
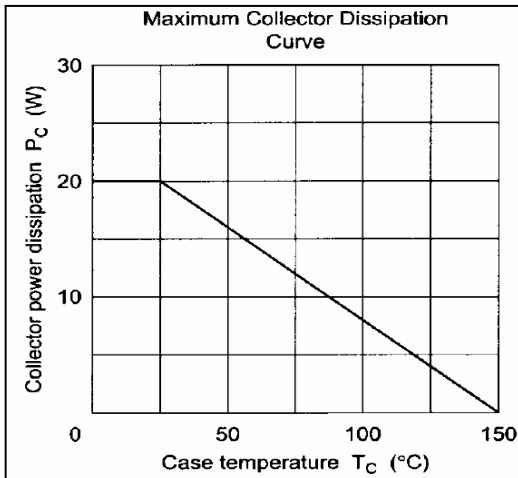
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
V <sub>(BR)CBO</sub>	180	-	-	V	I <sub>C</sub> =1mA, I <sub>E</sub> =0
V <sub>(BR)CEO</sub>	160	-	-	V	I <sub>C</sub> =10mA, R <sub>BE</sub> =∞
V <sub>(BR)EBO</sub>	5	-	-	V	I <sub>E</sub> =1mA, I <sub>C</sub> =0
I <sub>CBO</sub>	-	-	10	uA	V <sub>CB</sub> =160V, I <sub>E</sub> =0
*V <sub>CE(sat)</sub>	-	-	1	V	I <sub>C</sub> =600mA, I <sub>B</sub> =50mA
*V <sub>BE(on)</sub>	-	-	1.5	V	V <sub>CE</sub> =5V, I <sub>C</sub> =150mA
*h <sub>FE1</sub>	60	-	200		V <sub>CE</sub> =5V, I <sub>C</sub> =150mA
*h <sub>FE2</sub>	30	-	-		V <sub>CE</sub> =5V, I <sub>C</sub> =500mA
f <sub>T</sub>	-	140	-	MHz	V <sub>CE</sub> =5V, I <sub>C</sub> =150mA
C <sub>ob</sub>	-	14	-	pF	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz

\* Pulse Test: Pulse Width ≤ 380us, Duty Cycle ≤ 2%

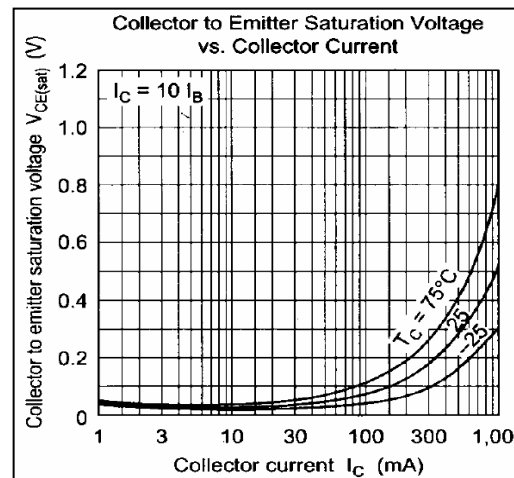
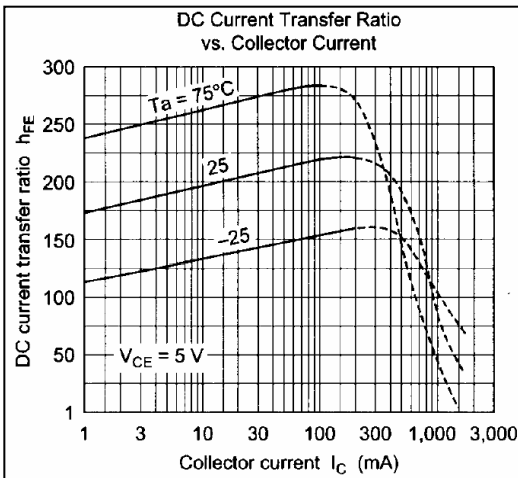
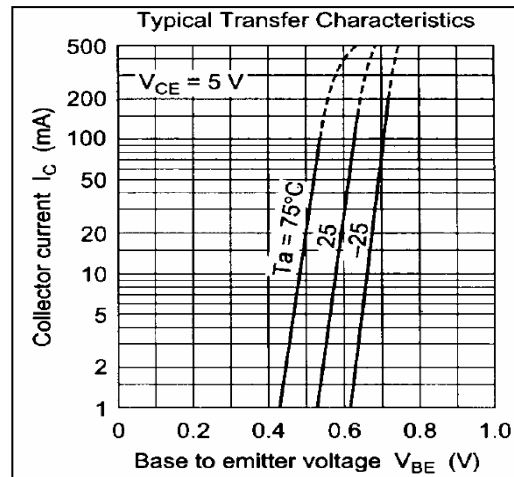
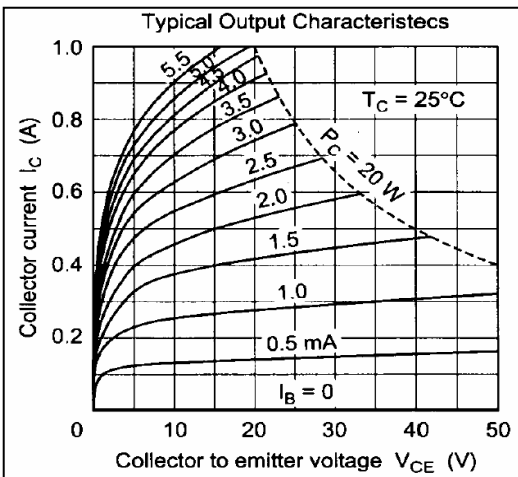
### Classification Of h<sub>FE1</sub>

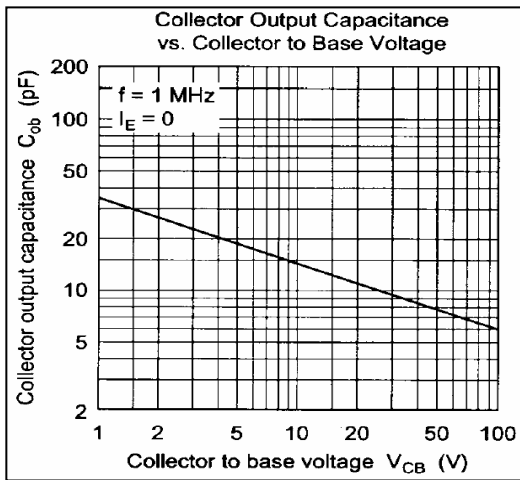
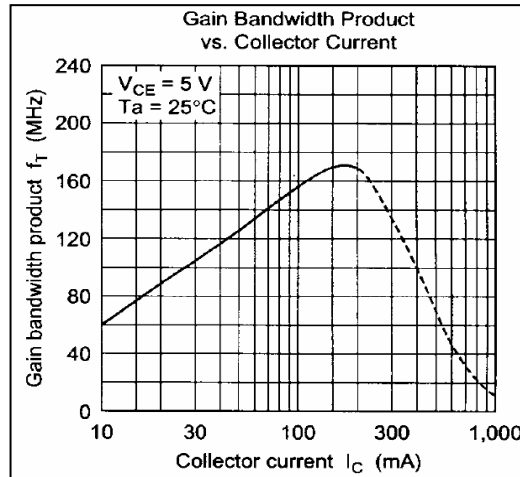
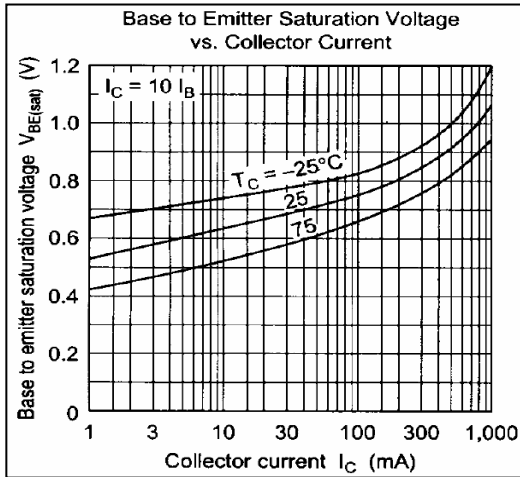
Rank	B	C
Range	60-120	100-200

## Typical Parameters Performance



## Characteristics Curve





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**Head Office And Factory:**

- **Taiwan:** No. 17-1 Tatung Rd. Fu Kou Hsin-Chu Industrial Park, Hsin-Chu, Taiwan, R. O. C.  
 TEL : 886-3-597-7061 FAX : 886-3-597-9220, 597-0785
- **China:** (201203) No.255, Jang-Jiang Tsai-Lueng RD. , Pu-Dung-Hsin District, Shang-Hai City, China  
 TEL : 86-21-5895-7671 ~ 4 FAX : 86-21-38950165