

# Low frequency amplifier

## 2SD2670

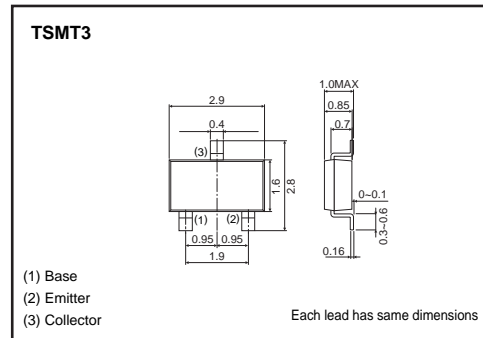
### ●Application

Low frequency amplifier  
Driver

### ●Features

- 1) A collector current is large.
- 2)  $V_{CE(sat)}$  : max.250mV  
At  $I_C=1.5A / I_B=30mA$

### ●External dimensions (Unit : mm)



### ●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CB0}$	15	V
Collector-emitter voltage	$V_{CE0}$	12	V
Emitter-base voltage	$V_{EB0}$	6	V
Collector current	$I_C$	3	A
	$I_{CP}$	6	A*1
Power dissipation	$P_C$	500	mW
		1*2	W
Junction temperature	$T_j$	150	°C
Range of storage temperature	$T_{stg}$	-55 to +150	°C

\*1 Single pulse,  $P_w=1ms$

\*2 Mounted on a 25×25×1.0mm Ceramic substrate

### ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CB0}$	15	—	—	V	$I_C=10\mu A$
Collector-emitter breakdown voltage	$BV_{CE0}$	12	—	—	V	$I_C=1mA$
Emitter-base breakdown voltage	$BV_{EB0}$	6	—	—	V	$I_E=10\mu A$
Collector cutoff current	$I_{CBO}$	—	—	100	nA	$V_{CB}=15V$
Emitter cutoff current	$I_{EBO}$	—	—	100	nA	$V_{EB}=6V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	120	250	mV	$I_C=1.5A, I_B=30mA$
DC current gain	$h_{FE}$	270	—	680	—	$V_{CE}=2V, I_C=500mA^*$
Transition frequency	$f_T$	—	360	—	MHz	$V_{CE}=2V, I_E=-500mA, f=100MHz^*$
Collector output capacitance	$C_{ob}$	—	30	—	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

\* Pulse

Transistors

●Packaging specifications

Type	package	Taping
	Code	TL
	Quantity (pcs)	3000
2SD2670		○

●Electrical characteristic curves

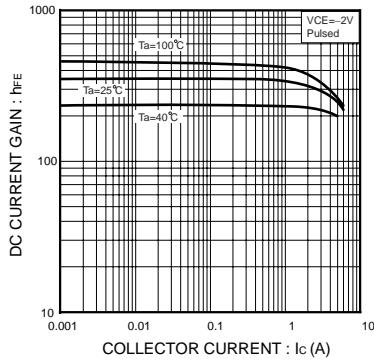


Fig.1 DC current gain vs. collector current

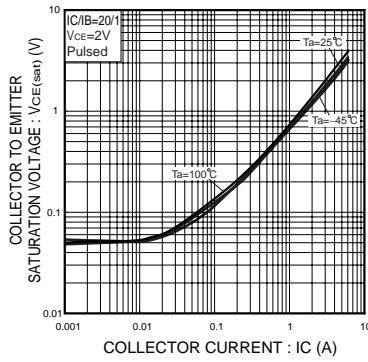


Fig.2 Collector-emitter saturation voltage vs. collector current

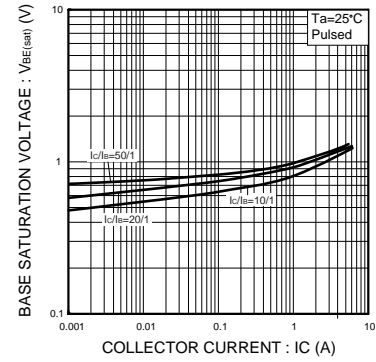


Fig.3 Base-emitter saturation voltage vs. collector current

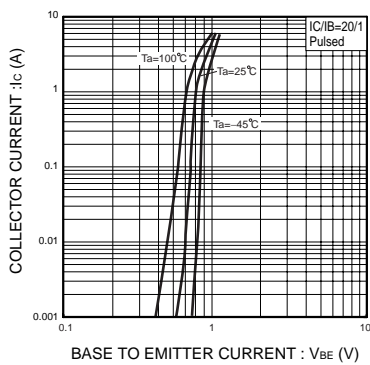


Fig.4 Grounded emitter propagation characteristics

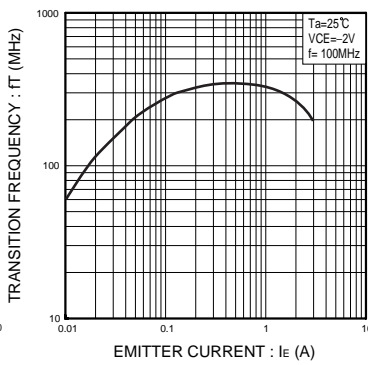


Fig.5 Gain bandwidth product vs. emitter current

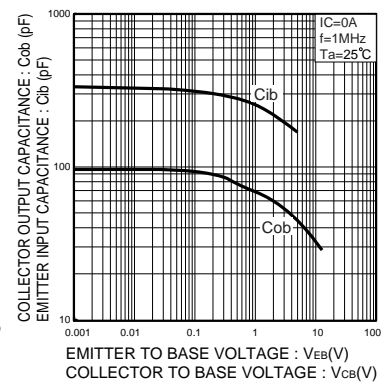


Fig.6 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage

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JAPAN	USA	EU	CHINA
CLASS III	CLASS III	CLASS II b	CLASS III
CLASS IV		CLASS III	

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  - Use of our Products in proximity to heat-producing components, plastic cords, or other flammable items
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  - Use of the Products in places subject to dew condensation
- The Products are not subject to radiation-proof design.
- Please verify and confirm characteristics of the final or mounted products in using the Products.
- In particular, if a transient load (a large amount of load applied in a short period of time, such as pulse, is applied, confirmation of performance characteristics after on-board mounting is strongly recommended. Avoid applying power exceeding normal rated power; exceeding the power rating under steady-state loading condition may negatively affect product performance and reliability.
- De-rate Power Dissipation depending on ambient temperature. When used in sealed area, confirm that it is the use in the range that does not exceed the maximum junction temperature.
- Confirm that operation temperature is within the specified range described in the product specification.
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For details, please refer to ROHM Mounting specification

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This Product is electrostatic sensitive product, which may be damaged due to electrostatic discharge. Please take proper caution in your manufacturing process and storage so that voltage exceeding the Products maximum rating will not be applied to Products. Please take special care under dry condition (e.g. Grounding of human body / equipment / solder iron, isolation from charged objects, setting of Ionizer, friction prevention and temperature / humidity control).

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1. Product performance and soldered connections may deteriorate if the Products are stored in the places where:
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  - [b] the temperature or humidity exceeds those recommended by ROHM
  - [c] the Products are exposed to direct sunshine or condensation
  - [d] the Products are exposed to high Electrostatic
2. Even under ROHM recommended storage condition, solderability of products out of recommended storage time period may be degraded. It is strongly recommended to confirm solderability before using Products of which storage time is exceeding the recommended storage time period.
3. Store / transport cartons in the correct direction, which is indicated on a carton with a symbol. Otherwise bent leads may occur due to excessive stress applied when dropping of a carton.
4. Use Products within the specified time after opening a humidity barrier bag. Baking is required before using Products of which storage time is exceeding the recommended storage time period.

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