

# Low frequency amplifier

## 2SD2670

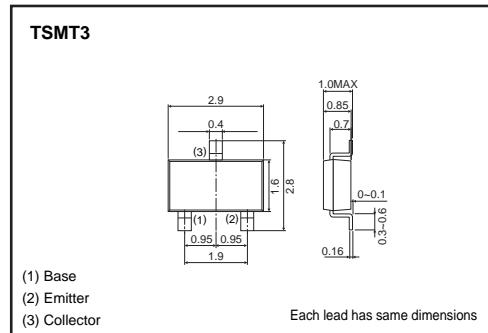
### ●Application

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 ( $T_a=25^\circ C$ )

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	15	V
Collector-emitter voltage	$V_{CEO}$	12	V
Emitter-base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	3	A
	$I_{CP}$	6	A*1
Power siddipation	$P_c$	500	mW
		1 *2	W
Junction temperature	$T_j$	150	$^\circ C$
Range of storage temperature	$T_{stg}$	-55 to +150	$^\circ C$

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

\*2 Mounted on a  $25\times 25\times 0.8mm$  Ceramic substrate

### ●Electrical characteristics ( $T_a=25^\circ C$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	15	—	—	V	$I_c=10\mu A$
Collector-emitter breakdown voltage	$BV_{CEO}$	12	—	—	V	$I_c=1mA$
Emitter-base breakdown voltage	$BV_{EBO}$	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
	Basic ordering unit (pieces)	3000
2SD2670		○

## ●Electrical characteristic curves

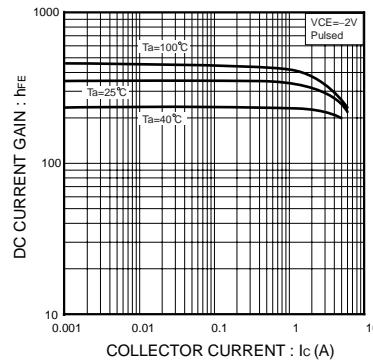


Fig.1 DC current gain  
vs. collector current

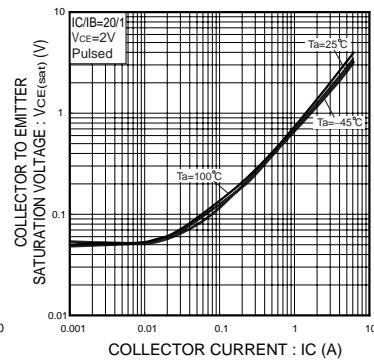


Fig.2 Collector-emitter saturation voltage vs. collector current

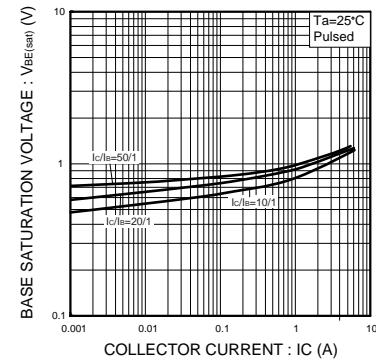


Fig.3 Base-emitter saturation voltage vs. collector current

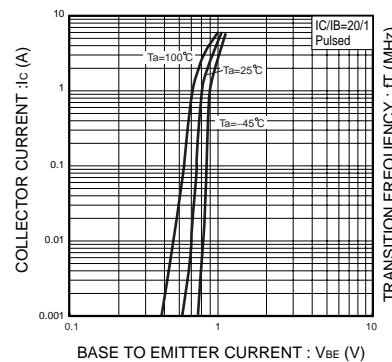


Fig.4 Grounded emitter propagation characteristics

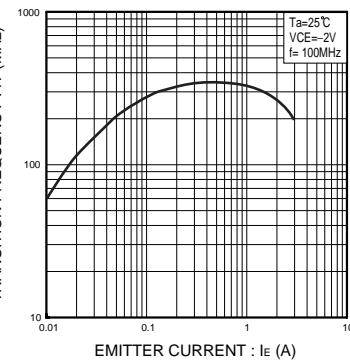


Fig.5 Gain bandwidth product vs. emitter current

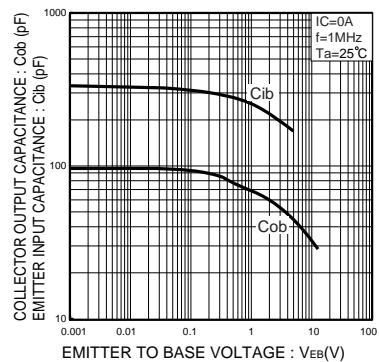


Fig.6 Collector output capacitance  
vs. collector-base voltage  
Emitter input capacitance  
vs. emitter-base voltage

## Appendix

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