

# Low frequency amplifier

## 2SD2670

### ●Application

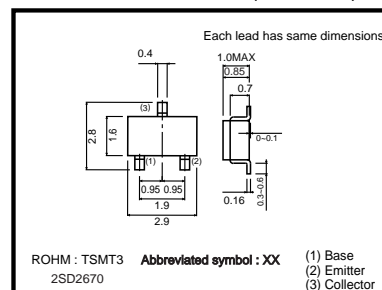
Low frequency amplifier

Driver

### ●Features

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

### ●External dimensions (Unit : mm)



### ●Absolute maximum ratings (Ta=25°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 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,  $P_w=1\text{ms}$

\*2 Mounted on a  $25 \times 25 \times 1.0$ mm Ceramic substrate

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

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

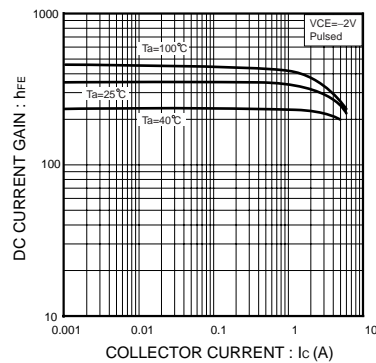
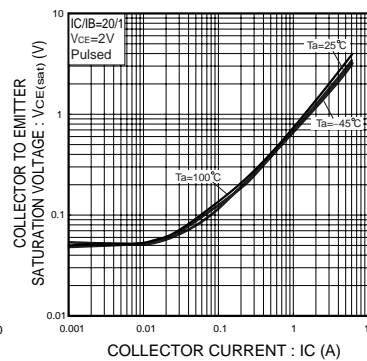
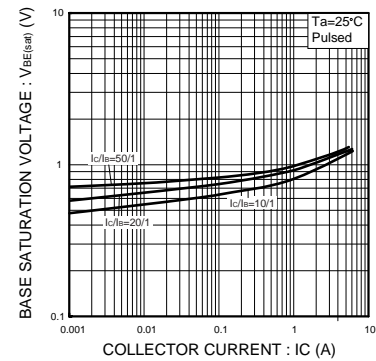
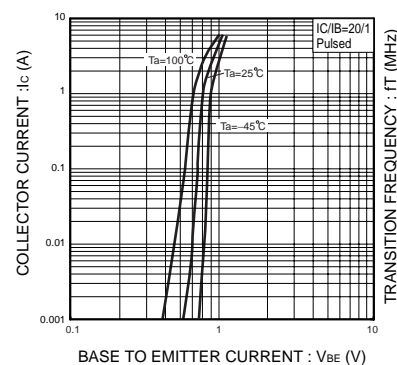
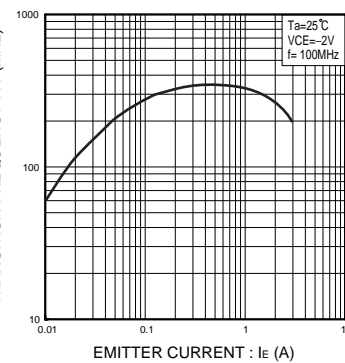
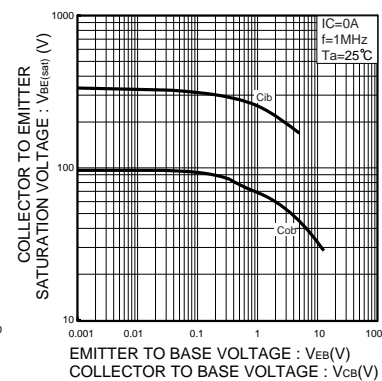
\* Pulse

## Transistors

## ●Packaging specifications

Type	package	Taping
	Code	TL
	Basic ordering unit (pieces)	3000
2SD2670		○

## ●Electrical characteristic curves

Fig.1 DC current gain  
vs. collector currentFig.2 Collector-emitter saturation voltage  
vs. collector currentFig.3 Base-emitter saturation voltage  
vs. collector currentFig.4 Grounded emitter propagation  
characteristicsFig.5 Gain bandwidth product  
vs. emitter currentFig.6 Collector output capacitance  
vs. collector-base voltage  
Emitter input capacitance  
vs. emitter-base voltage

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