

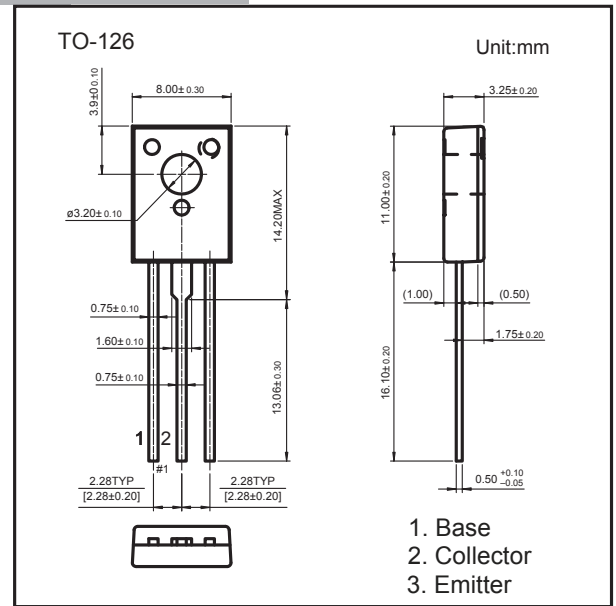
## SOT-126 Plastic-Encapsulate Transistors

### FEATURES

- Low Frequency Power Amplifier Complementary Pair with 2SB649 / 2SB649A
- TRANSISTOR (NPN)

### MECHANICAL DATA

- Case style: TO-126 molded plastic
- Mounting position: any



## MAXIMUM RATINGS AND CHARACTERISTICS

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector- Base Voltage	180	V
$V_{CEO}$	Collector-Emitter Voltage	2SD669	120
		2SD669A	160
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	1.5	A
$P_C$	Collector Dissipation	1	W
$T_J$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature	-55-150	°C

### ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2SD669	TO-126	Bulk	200pcs/Bag
2SD669A	TO-126	Bulk	200pcs/Bag
2SD669-TU	TO-126	Tube	60pcs/Tube
2SD669A-TU	TO-126	Tube	60pcs/Tube

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	2SD669	120		V
			2SD669A	160		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=160V, I_E=0$			10	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			10	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=150mA$	2SD669	60	320	
			2SD669A	60	200	
	$h_{FE(2)}$	$V_{CE}=5V, I_C=500mA$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			1	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=5V, I_C=150mA$			1.5	V
Transition frequency	$f_T$	$V_{CE}=5V, I_C=150mA$		140		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		14		pF

### CLASSIFICATION OF $h_{FE(1)}$

Rank	B	C	D
2SD669	60-120	100-200	160-320
2SD669A	60-120	100-200	

Type	2SD669	2SD669A
Marking	B649	B649A

# RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics

