

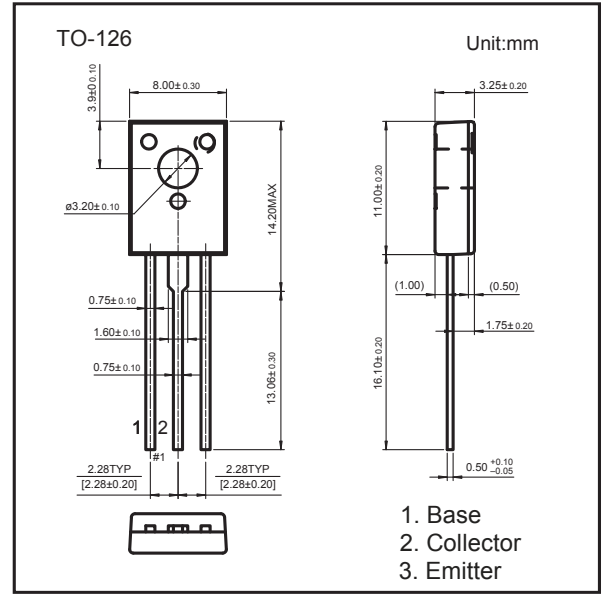
TO-126 Plastic-Encapsulate Transistors

Features

- Low Frequency Power Amplifier Complementary Pair with 2SD669 / 2SD669A
- Collector-Emitter Voltage :-160V Collector
- Current :-1.5A
- PNP Silicon Transistor

MECHANICAL DATA

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



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector- Base Voltage	-180	V
V _{CEO}	Collector-Emitter Voltage	2SB649	-120
		2SB649A	-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
2SB649	TO-126	Bulk	200pcs/Bag
2SB649A	TO-126	Bulk	200pcs/Bag
2SB649-TU	TO-126	Tube	60pcs/Tube
2SB649A-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	2SB649	-120		V
			2SB649A	-160		
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = -1mA, I _C = 0	-5			V
Collector cut-off current	I _{CB0}	V _{CB} = -160V, I _E = 0			-10	μA
Emitter cut-off current	I _{EBO}	V _{EB} = -4V, I _C = 0			-10	μA
DC current gain	h _{FE(1)}	V _{CE} = -5V, I _C = -150mA	2SB649	60	320	
			2SB649A	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		27		pF

CLASSIFICATION OF h_{FE(1)}

Rank	B	C	D
2SB649	60-120	100-200	160-320
2SB649A	60-120	100-200	

Type	2SD669	2SD669A
Marking	D669	D669A