

TO-126 Plastic-Encapsulate Transistors

2SD669AL TRANSISTOR (NPN)

FEATURES

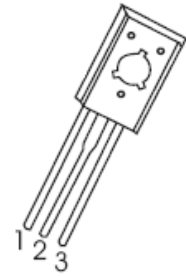
- Low Frequency Power Amplifier

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	170	V
V_{EBO}	Emitter-Base Voltage	6.5	V
I_C	Collector Current	1	A
P_C	Collector Power Dissipation	1	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	125	$^{\circ}\text{C}/\text{W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

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1. EMITTER
2. COLLECTOR
3. BASE



ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	200			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	170			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	6.5			V
Collector cut-off current	I_{CBO}	$V_{CB}=195\text{V}, I_E=0$			1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=165\text{V}, I_B=0$			2	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=0.15\text{A}$	100		320	
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=500\text{mA}$	33			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=0.5\text{A}, I_B=0.05\text{A}$			0.9	V
Base-emitter voltage	V_{BE}	$V_{CE}=5\text{V}, I_C=0.15\text{A}$			1.4	V
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		14		pF
Transition frequency	f_T	$V_{CE}=5\text{V}, I_C=150\text{mA}$		140		MHz

CLASSIFICATION of $h_{FE(1)}$

RANK	C	D
RANGE	100-200	160-320

Typical Characteristics

2SD669AL

