



Micro Commercial Components

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2SD874
2SD874-Q
2SD874-R
2SD874-S

Features

- With SOT-89 package
- Power amplifier applications
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CE0}	Collector-Emitter Voltage	25	V
V_{CBO}	Collector-Base Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1	A
P_C	Collector power dissipation	500	mW
T_J	Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Type	Max	Units
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=2\text{mA}$, $I_E=0$)	25	---	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=10\mu\text{A}$, $I_E=0$)	30	---	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=10\mu\text{A}$, $I_C=0$)	5	---	---	Vdc
I_{CBO}	Collector-Base Cutoff Current ($V_{CB}=20\text{Vdc}$, $I_E=0$)	---	---	0.1	μA
I_{EBO}	Emitter-Base Cutoff Current ($V_{EB}=4\text{Vdc}$, $I_C=0$)	---	---	0.1	μA

ON CHARACTERISTICS

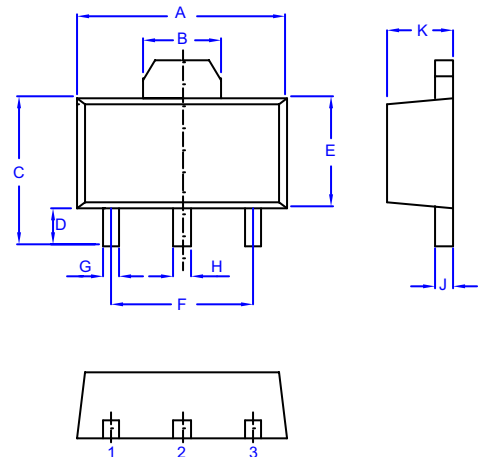
h_{FE}	Forward Current Transfer ratio ($I_C=500\text{mA}$, $V_{CE}=10\text{Vdc}$) ($I_C=1.0\text{A}$, $V_{CE}=5\text{Vdc}$)	85 50	---	340 ---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=500\text{mA}$, $I_B=50\text{mA}$)	---	---	0.4	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=500\text{mA}$, $I_B=50\text{mA}$)	---	---	1.2	Vdc
f_T	Transistor Frequency ($I_C=50\text{mA}$, $V_{CE}=10\text{Vdc}$, $f=200\text{MHz}$)	---	200	---	MHz
C_{ob}	Collector Output Capacitance ($V_{CB}=10\text{Vdc}$, $I_E=0$, $f=1\text{MHz}$)	---	20	---	pF

Classification Of h_{FE}

Rank	Q	R	S
Range	85-170	120-240	170-340
Marking	ZQ	ZR	ZS

NPN Silicon
Power Transistors

SOT-89



1. Base
2. Collector
3. Emitter

DIM	DIMENSIONS				NOTES
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.173	.181	4.39	4.60	
B	.063	.071	1.60	1.80	
C	.154	.165	3.91	4.19	
D	.031	.039	0.80	1.00	
E	.092	.100	2.34	2.54	
F	.118	-----	3.00	-----	TYP
G	.013	.019	0.33	0.48	
H	.015	.021	0.38	0.53	
J	.015	.016	0.38	0.41	
K	.055	.063	1.40	1.60	



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