



Micro Commercial Components



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**2SD874A-Q  
 2SD874A-R  
 2SD874A-S**

**Features**

- Halogen free available upon request by adding suffix "-HF"
- Power amplifier applications
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

**Maximum Ratings**

Symbol	Rating	Rating	Unit
V <sub>CEO</sub>	Collector-Emitter Voltage	50	V
V <sub>CBO</sub>	Collector-Base Voltage	60	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current	1	A
P <sub>C</sub>	Collector power dissipation	500	mW
T <sub>J</sub>	Junction Temperature	-55 to +150	°C
T <sub>STG</sub>	Storage Temperature	-55 to +150	°C

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Symbol	Parameter	Min	Type	Max	Units
<b>OFF CHARACTERISTICS</b>					
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage (I <sub>C</sub> =2mA <sub>dc</sub> , I <sub>B</sub> =0)	50	---	---	Vdc
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage (I <sub>C</sub> =10uA <sub>dc</sub> , I <sub>E</sub> =0)	60	---	---	Vdc
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage (I <sub>E</sub> =10uA <sub>dc</sub> , I <sub>C</sub> =0)	5	---	---	Vdc
I <sub>CBO</sub>	Collector-Base Cutoff Current (V <sub>CB</sub> =20Vdc, I <sub>E</sub> =0)	---	---	0.1	uA <sub>dc</sub>
I <sub>EBO</sub>	Emitter-Base Cutoff Current (V <sub>EB</sub> =4Vdc, I <sub>C</sub> =0)	---	---	0.1	uA <sub>dc</sub>

**ON CHARACTERISTICS**

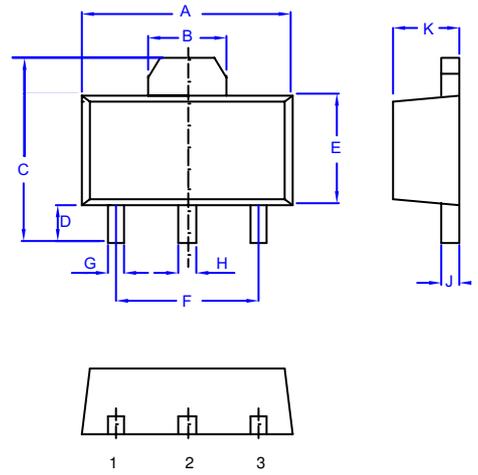
h <sub>FE</sub>	Forward Current Transfer ratio (I <sub>C</sub> =500mA <sub>dc</sub> , V <sub>CE</sub> =10Vdc) (I <sub>C</sub> =1.0A <sub>dc</sub> , V <sub>CE</sub> =5Vdc)	85 50	---	340 ---	---
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage (I <sub>C</sub> =500mA <sub>dc</sub> , I <sub>B</sub> =50mA <sub>dc</sub> )	---	---	0.4	Vdc
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage (I <sub>C</sub> =500mA <sub>dc</sub> , I <sub>B</sub> =50mA <sub>dc</sub> )	---	---	1.2	Vdc
f <sub>T</sub>	Transistor Frequency (I <sub>C</sub> =50mA <sub>dc</sub> , V <sub>CE</sub> =10Vdc, f=200MHz)	---	200	---	MHz
C <sub>ob</sub>	Collector Output Capacitance (V <sub>CB</sub> =10Vdc, I <sub>E</sub> =0, f=1MHz)	---	20	---	pF

**Classification Of h<sub>FE</sub>(1)**

Rank	Q	R	S
Range	85-170	120-240	170-340
Marking	YQ	YR	YS

**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	4.25	
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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### Ordering Information :

Device	Packing
Part Number-TP	Tape & Reel; 1 Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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