



**THE DATASHEET OF  
2SD874-S-TP**





Micro Commercial Components



Micro Commercial Components  
20736 Marilla Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

# 2SD874-Q 2SD874-R 2SD874-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
$V_{CE0}$	Collector-Emitter Voltage	25	V
$V_{CB0}$	Collector-Base Voltage	30	V
$V_{EB0}$	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
<b>OFF CHARACTERISTICS</b>					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=2mA_{dc}$ , $I_B=0$ )	25	---	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=10\mu A_{dc}$ , $I_E=0$ )	30	---	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=10\mu A_{dc}$ , $I_C=0$ )	5	---	---	Vdc
$I_{CBO}$	Collector-Base Cutoff Current ( $V_{CB}=20V_{dc}$ , $I_E=0$ )	---	---	0.1	$\mu A_{dc}$
$I_{EBO}$	Emitter-Base Cutoff Current ( $V_{EB}=4V_{dc}$ , $I_C=0$ )	---	---	0.1	$\mu A_{dc}$

## ON CHARACTERISTICS

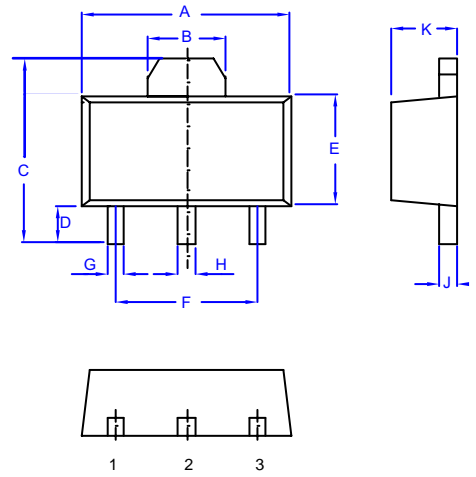
$h_{FE}$	Forward Current Transfer ratio ( $I_C=500mA_{dc}$ , $V_{CE}=10V_{dc}$ ) ( $I_C=1.0A_{dc}$ , $V_{CE}=5V_{dc}$ )	85 50	---	340 ---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=500mA_{dc}$ , $I_B=50mA_{dc}$ )	---	---	0.4	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C=500mA_{dc}$ , $I_B=50mA_{dc}$ )	---	---	1.2	Vdc
$f_T$	Transistor Frequency ( $I_C=50mA_{dc}$ , $V_{CE}=10V_{dc}$ , $f=200MHz$ )	---	200	---	MHz
$C_{ob}$	Collector Output Capacitance ( $V_{CB}=10V_{dc}$ , $I_E=0$ , $f=1MHz$ )	---	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	4.25	
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; 1Kpcs/Reel

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

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