

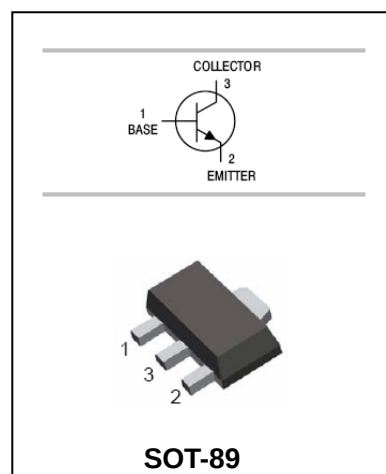
Silicon NPN Epitaxial Planer Type

2SD874 2SD874A

FEATURES

- Large collector power dissipation P_C
- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Complementary to 2SB766 and 2SB766A
- RoHS compliant with Halogen-free

HF



ORDERING INFORMATION

Type No.	Marking	Package Code
2SD874-Q	ZQ	SOT-89
2SD874-R	ZR	SOT-89
2SD874-S	ZS	SOT-89
2SD874A-Q	YQ	SOT-89
2SD874A-R	YR	SOT-89
2SD874A-S	YS	SOT-89

MAXIMUM RATING @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	2SD874 30	V
		2SD874A 60	
V_{CEO}	Collector-Emitter Voltage	2SD874 25	V
		2SD874A 50	
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1	A
P_C	Collector power dissipation	1	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 to +150	$^\circ\text{C}$

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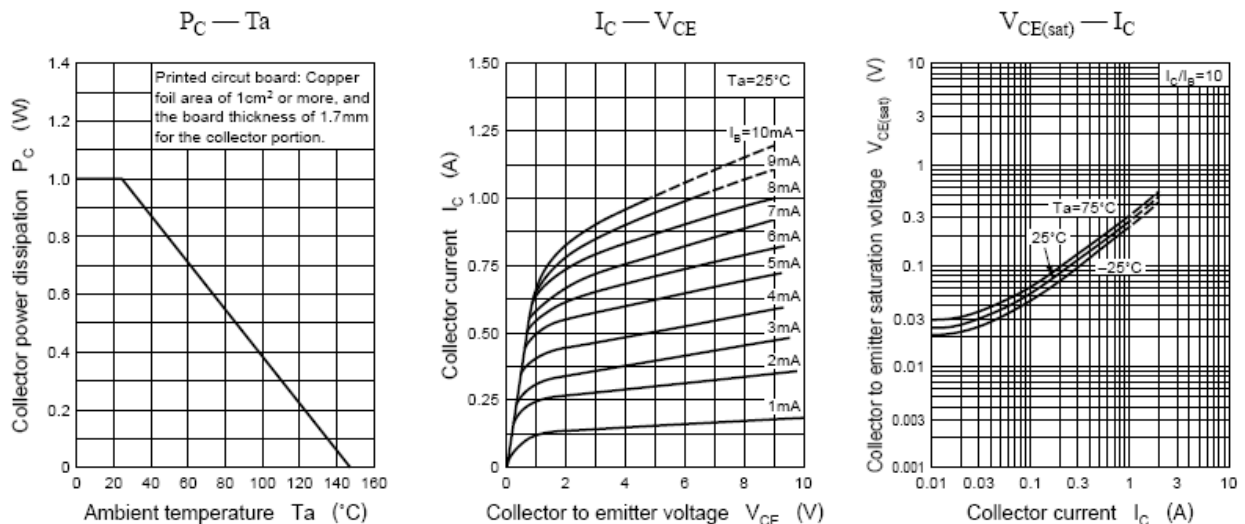
ELECTRICAL CHARACTERISTICS @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage 2SD874 2SD874A	$V_{(BR)CBO}$	$I_C=10\mu\text{A}$, $I_E=0$	30 60			V
Collector-emitter breakdown voltage 2SD874 2SD874A	$V_{(BR)CEO}$	$I_C=2\text{mA}$, $I_B=0$	25 50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}$, $I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20\text{V}$, $I_E=0$			0.1	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C/I_B=0.5\text{A}/0.05\text{A}$		0.2	0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C/I_B=0.5\text{A}/0.05\text{A}$		0.85	1.2	V
DC current gain(note)	h_{FE}	$V_{CE}=10\text{V}$, $I_C=0.5\text{A}$	85		340	
		$V_{CE}=5\text{V}$, $I_C=1\text{A}$	50			
Current gain bandwidth product	f_T	$V_{CE}=10\text{V}$, $I_E=0.05\text{A}$, $f=200\text{MHz}$		200		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}$, $f=1\text{MHz}$, $I_E=0$			20	pF

CLASSIFICATION OF h_{FE2}

RANK		Q	R	S
RANGE		85-170	120-240	170-340
MARKING	2SD874	ZQ	ZR	ZS
	2SD874A	YQ	YR	YS

TYPICAL CHARACTERISTICS @ $T_A=25^\circ\text{C}$ unless otherwise specified



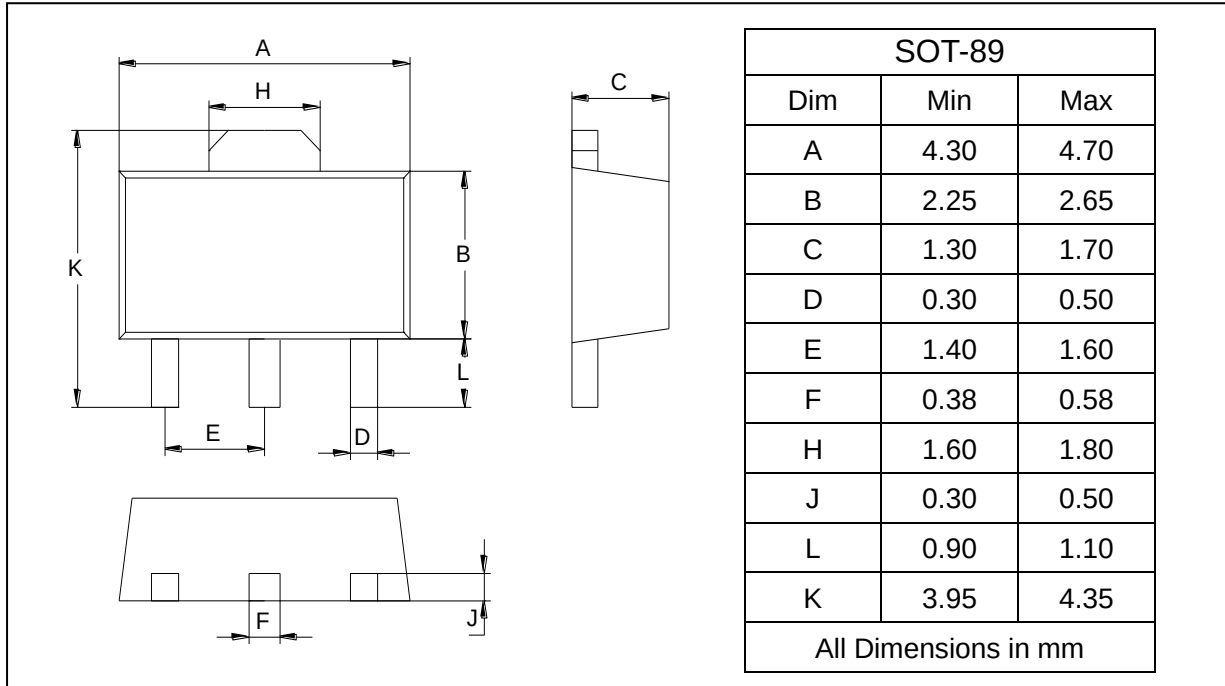
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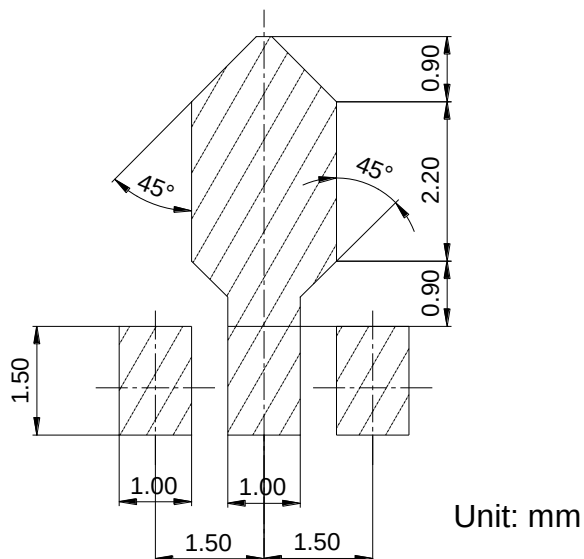
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SD874/2SD874A	SOT-89	1000pcs / Tape & Reel