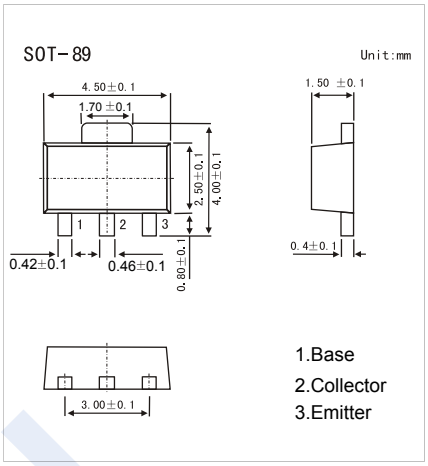
NPN Transistors

2SD874-HF



■ Features

- Low Collector-Emitter Saturation Voltage
- Large Collector Power Dissipation
- Mini Power Type Package
- Complimentary to 2SB766-HF
- Pb−Free Package May be Available. The G−Suffix Denotes a Pb−Free Lead Finish

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	30	V
Collector - Emitter Voltage	V_{CEO}	25	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	1	A
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	250	℃/W
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA, I_E= 0	30			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, I_B= 0	25			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A, I_C= 0	5			
Collector-base cut-off current	I_{CBO}	V_{CB}= 20 V , I_E= 0			100	nA
Emitter cut-off current	I_{EBO}	V_{EB}= 4V , I_C=0			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500 mA, I_B=50mA			0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=500 mA, I_B=50mA			1.2	
DC current gain	$h_{FE(1)}$	V_{CE}= 10V, I_C= 500mA	85		340	
	$h_{FE(2)}$	V_{CE}= 5V, I_C= 1A	50			
Collector output capacitance	C_{ob}	V_{CB}= 10V, I_E= 0,f=1MHz			20	pF
Transition frequency	f_T	V_{CE}= 10V, I_C= 50mA,f=200MHz		200		MHz

■ Classification of $h_{fe(1)}$

Type	2SD874-Q-HF	2SD874-R-HF	2SD874-S-HF
Range	85-170	120-240	170-340
Marking	ZQ F	ZR F	ZS F