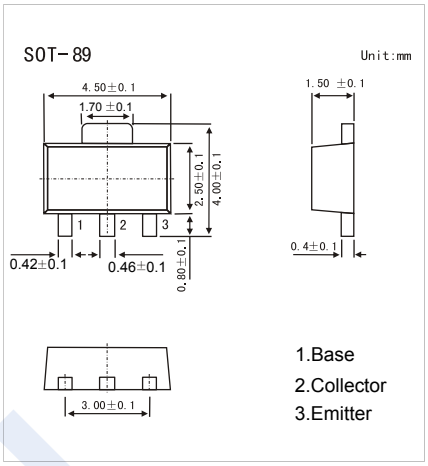
NPN Transistors

2SD2150-HF



■ Features

- Excellent current-to-gain characteristics
- Low collector saturation voltage $V_{CE(sat)}$
- Complementary to 2SB1412-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}	40	V
Collector - Emitter Voltage	V_{CEO}	20	
Emitter - Base Voltage	V_{EBO}	6	
Collector Current - Continuous	I_C	3	A
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= 100uA, I_E= 0	40			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, I_B= 0	20			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100u A, I_C= 0	6			
Collector-base cut-off current	I_{CBO}	V_{CB}= 35 V , I_E= 0			0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V , I_C=0			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=2 A, I_B=100mA			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=2 A, I_B=100mA			1.2	
DC current gain	h_{FE}	V_{CE}= 2V, I_C= 100mA	180		560	
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		25		pF
Transition frequency	f_T	V_{CE}=2V,I_C=500mA,f=100MHz		290		MHz

■ Classification of h_{fe}

Type	2SD2150-R-HF	2SD2150-S-HF
Range	180-390	270-560
Marking	CF R* $_F$	CF S* $_F$

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■ Typical Characterisitics