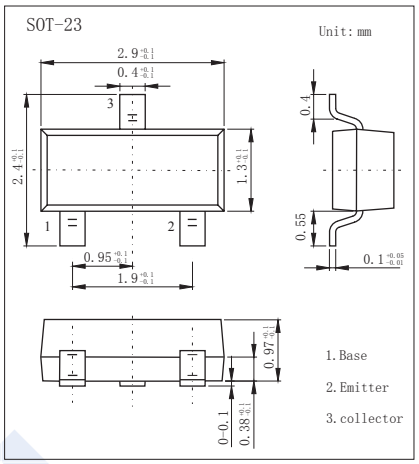
NPN Transistors

2SC2714-HF



■ Features

- Collector Current Capability I_C=20mA
- Collector Emitter Voltage V_{CEO}=30V
- 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}	30	
Emitter - Base Voltage	V_{EBO}	4	
Collector Current - Continuous	I_C	20	mA
Collector Power Dissipation	P_C	100	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	1000	℃/W
Junction Temperature	T_J	125	℃
Storage Temperature Range	T_{stg}	-55 to 125	

■ 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	40			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, I_B= 0	30			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A, I_C= 0	4			
Collector-base cut-off current	I_{CBO}	V_{CB}= 18 V , I_E= 0			0.5	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 4V , I_C=0			0.5	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100 mA, I_B=10mA			0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=100 mA, I_B=10mA			1.2	
DC current gain	h_{FE}	V_{CE}= 6V, I_C= 1mA	40		200	
Noise Figure	NF	V_{CE}= 6V, I_E= -1mA,f=100MHz		2.5	5	dB
Reverse Transfer capacitance	C_{re}	V_{CB}= 6V, I_E= 0,f=1MHz		0.7		pF
Transition frequency	f_T	V_{CE}= 6V, I_C= 1mA		550		MHz

■ Classification of h_{fe}

Type	2SC2714-R-HF	2SC2714-O-HF	2SC2714-Y-HF
Range	40-80	70-140	100-200
Marking	QR F	QO F	QY F

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■ Typical Characterisitics

