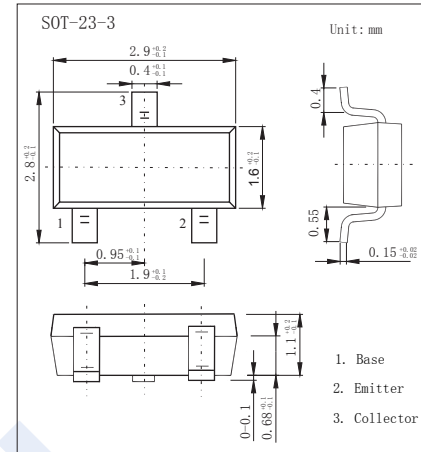


NPN Transistors

2SC2712-HF

■ Features

- High voltage and high current: $V_{CE0} = 50\text{ V}$, $I_C = 150\text{ mA}$ (max)
- Excellent hFE linearity : $h_{FE}(I_C = 0.1\text{ mA})/h_{FE}(I_C = 2\text{ mA}) = 0.95$ (typ.)
- High hFE: $h_{FE} = 70 \sim 700$
- Low noise: $NF = 1\text{ dB}$ (typ.), 10 dB (max)
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	60	V
Collector-emitter voltage	V_{CE0}	50	V
Emitter-base voltage	V_{EB0}	5	V
Collector current	I_C	150	mA
Base current	I_B	30	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +125	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100\ \mu\text{A}$, $I_E = 0$	60			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1\text{ mA}$, $I_B = 0$	50			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100\ \mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 60\text{ V}$, $I_E = 0$			100	nA
Emitter cut-off current	I_{EB0}	$V_{EB} = 5\text{ V}$, $I_C = 0$			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$			0.25	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 6\text{ V}$, $I_C = 2\text{ mA}$	70		700	
Noise figure	NF	$V_{CE} = 6\text{ V}$, $I_C = 0.1\text{ mA}$, $f = 1\text{ kHz}$, $R_G = 10\text{ k}\Omega$		1	10	dB
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$		2	3.5	pF
Transition frequency	f_T	$V_{CE} = 10\text{ V}$, $I_C = 1\text{ mA}$	80			MHz

■ hFE Classification

Type	2SC2712-O-HF	2SC2712-Y-HF	2SC2712-G-HF	2SC2712-L-HF
Range	70-140	120-240	200-400	350-700
Marking	LO _F	LY _F	LG _F	LL _F

NPN Transistors

2SC2712-HF

Typical Characteristics

