

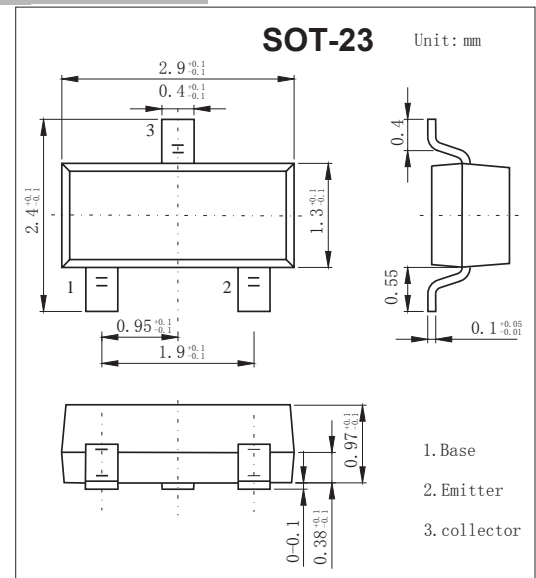
## SOT-23 Plastic-Encapsulate Transistors

### 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.),  $10\text{ dB}$  (max)
- NPN Transistors

### MECHANICAL DATA

- Case style: SOT-23 molded plastic
- Mounting position: any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	60	V
Collector-emitter voltage	$V_{CEO}$	50	V
Emitter-base voltage	$V_{EBO}$	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	°C
Storage temperature range	$T_{stg}$	-55 to +125	°C

### PACKAGE INFORMATION

Device	Package	Shipping
2SC2712	SOT-23	3000/Tape&Reel

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CBO}$	$I_C = 100\ \mu\text{A}$ , $I_E = 0$	60			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_C = 1\text{ mA}$ , $I_B = 0$	50			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = 100\ \mu\text{A}$ , $I_C = 0$	5			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = 60\text{ V}$ , $I_E = 0$			100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5\text{ V}$ , $I_C = 0$			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	hFE	$V_{CE} = 6\text{ V}$ , $I_C = 2\text{ mA}$	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	2SC2712-Y	2SC2712-G	2SC2712-L
Range	70-140	120-240	200-400	350-700
Marking	LO	LY	LG	LL



# RATINGS AND CHARACTERISTIC CURVES

## Typical Characteristics

