

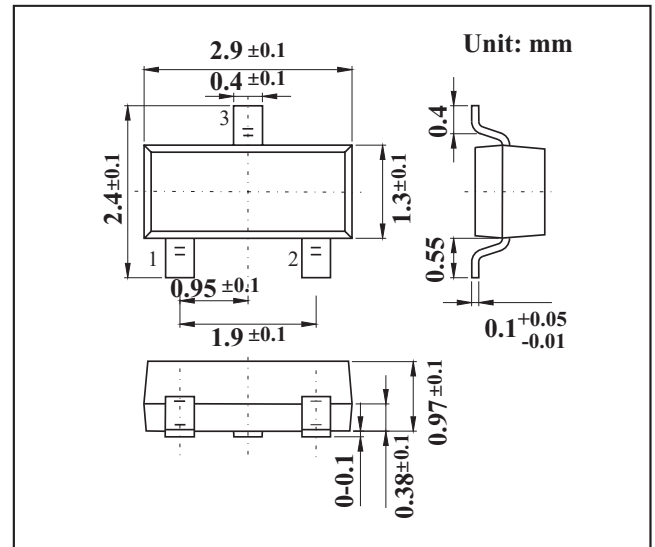
SOT-23 Plastic-Encapsulate Transistors

Features

- High voltage and high current: $V_{CE0} = 50\text{ V}$, $I_C = 150\text{ mA}$ (max)
- Excellent hFE linearity : hFE ($I_C = 0.1\text{ mA}$)/ hFE ($I_C = 2\text{ mA}$)= 0.95 (typ.)
- High hFE: hFE = 70 ~ 700
- Low noise: NF = 1dB (typ.), 10dB (max)
- NPN Transistors

MECHANICAL DATA

- Case style:SOT-23molded 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}	$I_C = 100\text{ }\mu\text{A}$, $I_E = 0$	60			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1\text{ mA}$, $I_B = 0$	50			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100\text{ }\mu\text{A}$, $I_C = 0$	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	fr	$V_{CE} = 10\text{ V}$, $I_C = 1\text{ mA}$	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

