

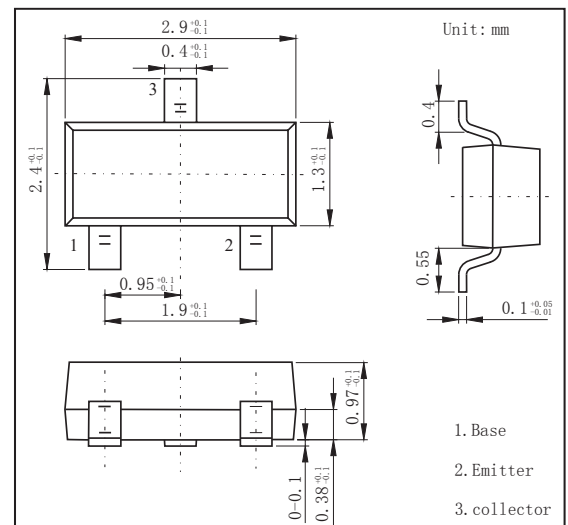
SOT-23 Plastic-Encapsulate Transistors

FEATURES

- Collector Current Capability $I_C=20\text{mA}$
- Collector Emitter Voltage $V_{CEO}=30\text{V}$
- NPN silicon transistor

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}	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	°C/W
Junction Temperature	T_J	125	°C
Storage Temperature Range	T_{stg}	-55 to +125	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100 \mu A, I_E = 0$	40			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1 \text{ mA}, I_B = 0$	30			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu A, I_C = 0$	4			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 18 \text{ V}, I_E = 0$			0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4 \text{ V}, I_C = 0$			0.5	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$			0.4	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}	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$	40		200	
Noise Figure	NF	$V_{CE} = 6 \text{ V}, I_E = -1 \text{ mA}, f = 100 \text{ MHz}$		2.5	5	dB
Reverse Transfer capacitance	C_{re}	$V_{CB} = 6 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		0.7		pF
Transition frequency	f_T	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$		550		MHz

RATINGS AND CHARACTERISTIC CURVES

