

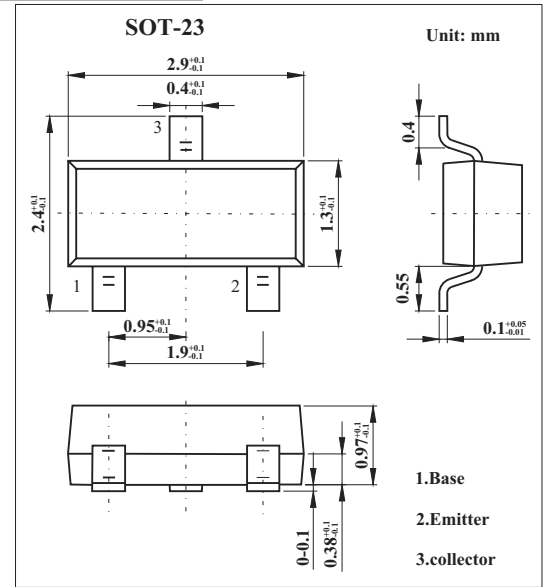
## SOT-23 Plastic-Encapsulate Transistors

### Features

- Switching 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 <sub>CBO</sub>	30	V
Collector-emitter voltage	V <sub>CEO</sub>	25	V
Emitter-base voltage	V <sub>EB0</sub>	5	V
Collector current	I <sub>C</sub>	200	mA
Power dissipation	P <sub>tot</sub>	330	mW
Operating and storage temperature range	T <sub>j</sub> , T <sub>stg</sub>	-55 to +150	°C

### PACKAGE INFORMATION

Device	Package	Shipping
FMMT4124	SOT-23	3000/Tape&Reel

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =10μA	30			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1mA	25			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10μA	5			V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CE</sub> =20V			50	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =3V			50	nA
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA			0.3	V
Base-emitter saturation voltage *	V <sub>BE(sat)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA			0.95	V
DC current gain *	h <sub>FE</sub>	I <sub>C</sub> =2mA, V <sub>CE</sub> =1V	120		360	
Current-gain-bandwidth product	f <sub>T</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =20V f=100MHz	300			MHz
Output capacitance	C <sub>obo</sub>	V <sub>CB</sub> =5V, I <sub>E</sub> =0, f=140KHz			4	pF
Input capacitance	C <sub>ibo</sub>	V <sub>BE</sub> =0.5V, I <sub>C</sub> =0, f=140KHz			8	pF
Noise figure	NF	V <sub>CE</sub> =5V I <sub>C</sub> =200μA, R <sub>g</sub> =2K? f=30Hz to 15KHz at -3dB points			6	dB
Small signal current transfer	h <sub>fe</sub>	I <sub>C</sub> =2mA, V <sub>CE</sub> =1V, f=1KHz	120	480		
Delay time	t <sub>d</sub>	V <sub>CC</sub> =3V, I <sub>C</sub> =10mA, I <sub>B1</sub> =1mA			24	ns
Rise time	t <sub>r</sub>	V <sub>BE(off)</sub> =0.5V			13	ns
Storage time	t <sub>s</sub>	V <sub>CC</sub> =3V, I <sub>C</sub> =10mA			125	ns
Fall time	t <sub>f</sub>	I <sub>B1</sub> = I <sub>B2</sub> =1mA			11	ns

\* Pulse test: t<sub>p</sub> ≤ 300 μs; d ≤ 0.02.

### Marking

Marking	ZC
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