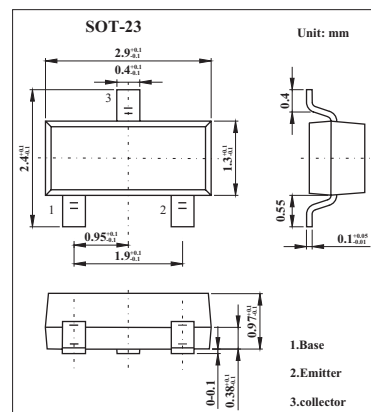


Switching Transistors

FMMT4124

■ Features

- Switching transistors.



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	30	V
Collector-emitter voltage	V_{CE0}	25	V
Emitter-base voltage	V_{EB0}	5	V
Collector current	I_C	200	mA
Power dissipation	P_{tot}	330	mW
Operating and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

FMMT4124■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}$	5			V
Collector cutoff current	I_{CBO}	$V_{CE}=20\text{V}$			50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=3\text{V}$			50	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C=50\text{mA}$, $I_B=5\text{mA}$			0.3	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C=50\text{mA}$, $I_B=5\text{mA}$			0.95	V
DC current gain *	h_{FE}	$I_C=2\text{mA}$, $V_{CE}=1\text{V}$	120		360	
Current-gain-bandwidth product	f_T	$I_C=10\text{mA}$, $V_{CE}=20\text{V}$ $f=100\text{MHz}$	300			MHz
Output capacitance	C_{obo}	$V_{CB}=5\text{V}$, $I_E=0$, $f=140\text{KHz}$			4	pF
Input capacitance	C_{ibo}	$V_{BE}=0.5\text{V}$, $I_C=0$, $f=140\text{KHz}$			8	pF
Noise figure	NF	$V_{CE}=5\text{V}$ $I_C=200\mu\text{A}$, $R_g=2\text{K}\Omega$ $f=30\text{Hz}$ to 15KHz at -3dB points			6	dB
Small signal current transfer	h_{fe}	$I_C=2\text{mA}$, $V_{CE}=1\text{V}$, $f=1\text{KHz}$	120	480		
Delay time	t_d	$V_{CC}=3\text{V}$, $I_C=10\text{mA}$, $I_{B1}=1\text{mA}$ $V_{BE(off)}=0.5\text{V}$			24	ns
Rise time	t_r				13	ns
Storage time	t_s				125	ns
Fall time	t_f				11	ns

* Pulse test: $t_p \leq 300\mu\text{s}$; $d \leq 0.02$.

■ Marking

Marking	ZC
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