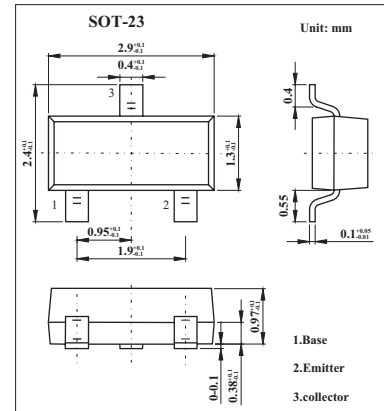


Switching Transistors

FMMT3903

■ Features

- Switching transistors

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	60	V
Collector-emitter voltage	V_{CE0}	40	V
Emitter-base voltage	V_{EB0}	6	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	$^\circ\text{C}$

FMMT3903

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =10μA	60			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA	40			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA	6			V
Collector cutoff current	I _{CEX}	V _{CE} =30V, V _{BE(off)} =3V			50	nA
Emitter cut-off current	I _{BEX}	V _{CE} =30V, V _{EB(off)} =3V			50	nA
DC current gain *	h _{FE}	I _C =10mA, V _{CE} =1V	50		150	
Collector-emitter saturation voltage *	V _{CE(sat)}	I _C =10mA, I _B =1mA I _C =50mA, I _B =5mA			0.2 0.3	V
Base-emitter saturation voltage *	V _{BE(sat)}	I _C =10mA, I _B =1mA I _C =50mA, I _B =5mA		0.65	0.85 0.95	V
Current-gain-bandwidth product	f _T	I _C =10mA, V _{CE} =20V f=100MHz	250			MHz
Output capacitance	C _{obo}	V _{CB} =5V, I _E =0, f=100KHz			4	pF
Input capacitance	C _{ibo}	V _{BE} =0.5V, I _C =0, f=100KHz			8	pF
Noise figure	NF	V _{CE} =5V I _C =200μA, R _g =2KΩ f=30Hz to 15KHz at-3dB points			6	dB
Delay time	t _d	V _{CC} =3V, I _C =10mA, I _{B1} =1mA			35	ns
Rise time	t _r	V _{BE(off)} =0.5V			35	ns
Storage time	t _s	V _{CC} =3V, I _C =10mA			175	ns
Fall time	t _f	I _{B1} = I _{B2} =1mA			50	ns

* Pulse test: t_p ≤ 300μs; d ≤ 0.02.

■ Marking

Marking	1W
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