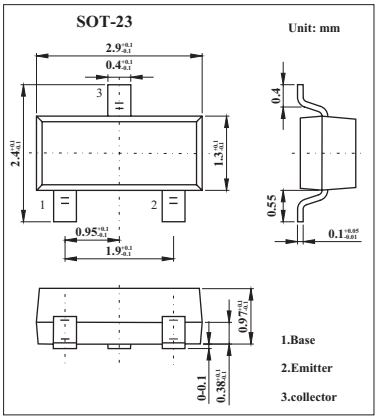
Switching Transistors

FMMT3903



■ Features

● Switching transistors

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	40	V
Emitter-base voltage	V_{EBO}	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	℃

FMMT3903

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	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 $V_{BE(off)}$=0.5V			35	ns
Rise time	t_r				35	ns
Storage time	t_s	V_{CC}=3V, I_C=10mA I_{B1}= I_{B2}=1mA			175	ns
Fall time	t_f				50	ns

* Pulse test: tp ⩽ 300μs; d ⩽ 0.02.

■ Marking

Marking	1W