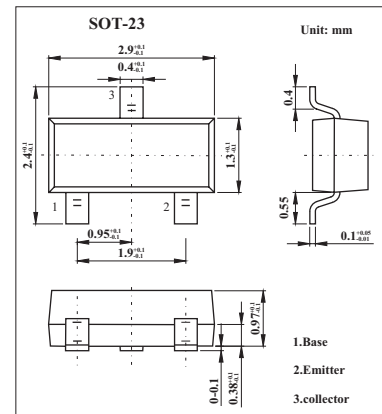


## Switching Transistor

## FM723

## ■ Features

- 625mW power dissipation
- $I_c$  CONT 2.5A
- $I_c$  Up To 10A peak pulse current
- Excellent hfe Characteristics Up To 10A (pulsed)
- Extremely Low Saturation Voltage E.g. 10mV Typ.
- Exhibits extremely low equivalent on-resistance;  $R_{CE(sat)}$

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	-100	V
Collector-emitter voltage	$V_{CEO}$	-100	V
Emitter-base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-1	A
Peak collector current	$I_{CM}$	-2.5	A
Base current	$I_B$	-500	mA
Power dissipation	$P_{tot}$	625	mW
Operating and storage temperature range	$T_j, T_{stg}$	-55 to +150	$^\circ\text{C}$

## FMMT723

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =-100μA	-100	-200		V
Collector-emitter breakdown voltage *	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-10mA	-100	-160		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =-100μA	-5	-8.8		V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> =-80V			-100	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =-4V			-100	nA
Collector Emitter Cut-Off Current	I <sub>CES</sub>	V <sub>CES</sub> =-80V			-100	nA
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> =-0.1A, I <sub>B</sub> =-10mA I <sub>C</sub> =-0.5A, I <sub>B</sub> =-50mA I <sub>C</sub> =-1A, I <sub>B</sub> =-150mA		-50 -125 -210	-80 -200 -330	mV
Base-emitter saturation voltage *	V <sub>BE(sat)</sub>	I <sub>C</sub> =-1A, I <sub>B</sub> =-150mA		-0.89	-1.0	V
Base-emitter voltage *	V <sub>BE(ON)</sub>	I <sub>C</sub> =-1A, V <sub>CE</sub> =-10V		-0.71	-1.0	V
Static Forward Current Transfer Ratio *	h <sub>FE</sub>	I <sub>C</sub> =-10mA, V <sub>CE</sub> =-10V	300	475		
		I <sub>C</sub> =-0.1A, V <sub>CE</sub> =-10V	300	450		
		I <sub>C</sub> =-0.5A, V <sub>CE</sub> =-10V	250	375		
		I <sub>C</sub> =-1A, V <sub>CE</sub> =-10V		250		
		I <sub>C</sub> =-1.5A, V <sub>CE</sub> =-10V		30		
Current-gain-bandwidth product	f <sub>T</sub>	I <sub>C</sub> =-50mA, V <sub>CE</sub> =-10V, f=100MHz		150	200	MHz
Output capacitance	C <sub>obo</sub>	V <sub>CB</sub> =-10V, f=1MHz		13	20	pF
Switching times	t <sub>on</sub>	I <sub>C</sub> =-0.5A, V <sub>CC</sub> =-50V		50		ns
	t <sub>off</sub>	I <sub>B1</sub> =I <sub>B2</sub> =-50mA		760		ns

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

## ■ Marking

Marking	723
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