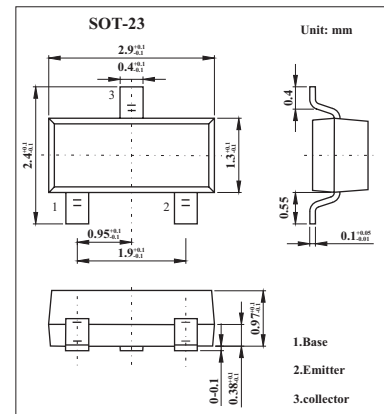


Medium Power Transistor

FMMT493

■ Features

- Medium power transistor.



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	120	V
Collector-emitter voltage	V_{CE0}	100	V
Emitter-base voltage	V_{EB0}	5	V
Peak collector current	I_{CM}	2	A
Collector current	I_C	1	A
Base current	I_B	200	mA
Power dissipation	P_{tot}	500	mW
Operating and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

FMMT493■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$	120			V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	$I_C=10\text{mA}$	100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$	5			V
Collector cutoff current	I_{CBO}	$V_{CB}=100\text{V}$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}$			100	nA
Collector cutoff current	I_{CES}	$V_{CB}=100\text{V}$			100	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$ $I_C=1\text{A}, I_B=100\text{mA}$			0.3 0.6	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C=1\text{A}, I_B=100\text{mA}$			1.15	V
Base-emitter voltage *	$V_{BE(ON)}$	$I_C=1\text{A}, V_{CE}=10\text{V}$			1.0	V
Static Forward Current Transfer Ratio	h_{FE}	$I_C=1\text{mA}, V_{CE}=10\text{V}^*$	100			
		$I_C=250\text{mA}, V_{CE}=10\text{V}^*$	100		300	
		$I_C=500\text{mA}, V_{CE}=10\text{V}^*$	60			
		$I_C=1\text{A}, V_{CE}=10\text{V}^*$	20			
Transition Frequency	f_T	$I_C=50\text{mA}, V_{CE}=10\text{V}, f=100\text{MHz}$	150			MHz
Collector-Base Breakdown Voltage	C_{obo}	$V_{CB}=10\text{V}, f=1\text{MHz}$			10	pF

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

■ Marking

Marking	493
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