

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	$^\circ\text{C}$

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA	120			V
Collector-emitter breakdown voltage *	V _{(BR)CEO}	I _C =10mA	100			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA	5			V
Collector cutoff current	I _{CBO}	V _{CB} =100V			100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =4V			100	nA
Collector cutoff current	I _{CES}	V _{CB} =100V			100	nA
Collector-emitter saturation voltage *	V _{CE(sat)}	I _C =500mA, I _B =50mA I _C =1A, I _B =100mA			0.3 0.6	V
Base-emitter saturation voltage *	V _{BE(sat)}	I _C =1A, I _B =100mA			1.15	V
Base-emitter voltage *	V _{BE(ON)}	I _C =1A, V _{CE} =10V			1.0	V
Static Forward Current Transfer Ratio	h _{FE}	I _C =1mA, V _{CE} =10V*	100			
		I _C =250mA, V _{CE} =10V*	100		300	
		I _C =500mA, V _{CE} =10V*	60			
		I _C =1A, V _{CE} =10V*	20			
Transition Frequency	f _T	I _C =50mA, V _{CE} =10V, f=100MHz	150			MHz
Collector-Base Breakdown Voltage	C _{obo}	V _{CB} =10V, f=1MHz			10	pF

* Pulse test: tp ≤ 300 μs; d ≤ 0.02.

■ Marking

Marking	493
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