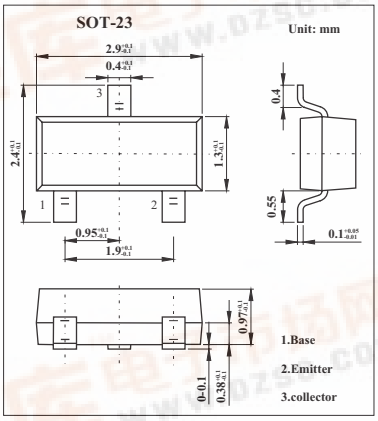
Switching Transistor

FMMT717



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 Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-12	V
Collector-emitter voltage	V_{CEO}	-12	V
Emitter-base voltage	V_{EBO}	-5	V
Peak collector current	I_{CM}	-10	A
Collector current	I_C	-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	℃

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA	-12	-35		V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	I_C=-10mA	-12	-25		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-100μA	-5	-8.5		V
Collector cutoff current	I_{CBO}	V_{CB}=-10V			-100	nA
Emitter cut-off current	I_{EBO}	V_{EB}=-4V			-100	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	I_C=-0.1A, I_B=-10mA I_C=-1A, I_B=-10mA I_C=-1.5A, I_B=-50mA I_C=-2.5A, I_B=-50mA		-10 -100 -110 -180	-17 -140 -170 -220	mV
Base-emitter saturation voltage *	$V_{BE(sat)}$	I_C=-2.5A,I_B=-50mA		-0.9	-1	V
Base-emitter voltage *	$V_{BE(ON)}$	I_C=-2.5A,V_{CE}=-2V		-0.8	-1	V
DC current gain *	h_{FE}	I_C=-10mA, V_{CE}=-2V I_C=-100mA, V_{CE}=-2V I_C=-2.5A, V_{CE}=-2V I_C=-8A, V_{CE}=-2V I_C=-10A, V_{CE}=-2V	300 300 180 60 45	475 450 275 100 70		
Current-gain-bandwidth product	f_T	I_C=-50mA,V_{CE}=-10V,f=100MHz	80	110		MHz
Output capacitance	C_{obo}	V_{CB}=-10V,f=1MHz		21	30	pF
Turn-on time	$t_{(on)}$	V_{CC}=-6V, I_C=-2A		70		ns
Turn-off time	$t_{(off)}$	I_{B1}=-I_{B2}=50mA		130		ns

* Pulse test: tp ⩽ 300 μs; d ⩽ 0.02.

■ Marking

Marking	717