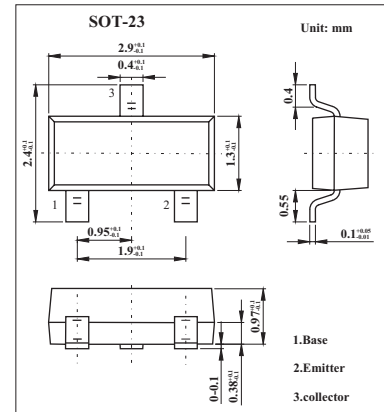


## Avalanche Transistor

### FMMT415

#### ■ Features

- High speed pulse generators
- SOT23 NPN Silicon Planar



#### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	260	V
Collector-emitter voltage	$V_{CE0}$	100	V
Emitter-base voltage	$V_{EB0}$	6	V
Peak collector current	$I_{CM}$	60	A
Collector current	$I_C$	500	mA
Power dissipation	$P_{tot}$	330	mW
Operating and storage temperature range	$T_j, T_{stg}$	-55 to +150	°C

#### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1mA, T_{amb}= -55 \text{ to } +150^\circ\text{C}$	260			V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	$I_C=100\mu A$	100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A$	6			V
Collector cutoff current	$I_{CBO}$	$V_{CB}=80V$			0.1	$\mu A$
		$V_{CB}=80V, T_{amb}=100^\circ\text{C}$			10	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V$			0.1	$\mu A$
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$			0.5	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C=10mA, I_B=1mA$			0.9	V
Current in second breakdown	$I_{SB}$	$V_C=200V, C_{CE}=620pF$	15			A
		$V_C=250V, C_{CE}=620pF$	25			A
DC current gain *	$h_{FE}$	$I_C=10mA, V_{CE}=10V$	25			
Transition frequency	$f_T$	$I_C=10mA, V_{CE}=20V, f=20MHz$	40			MHz
Collector-base capacitance	$C_{cb}$	$V_{CB}=20V, I_E=0, f=1MHz$			8	pF

\* Pulse test:  $t_p = 300 \mu s$ ;  $d \leq 0.02$ .

#### ■ Marking

Marking	415
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