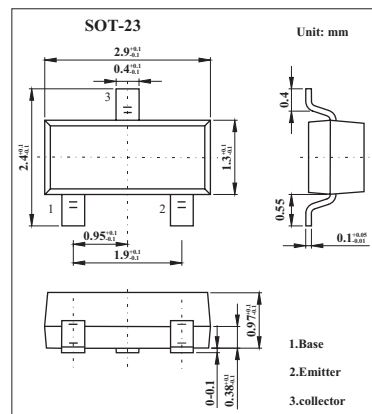


Power Darlington Transistor

FMMT614

■ Features

- h_{FE} up to 5k at $I_C = 500\text{mA}$
- Fast switching
- Low $V_{CE(sat)}$ at High I_C

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	120	V
Collector-emitter voltage	V_{CEO}	100	V
Emitter-base voltage	V_{EBO}	10	V
Collector current	I_C	500	mA
Peak collector current	I_{CM}	2	A
Power dissipation	P_{tot}	500	mW
Operating and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

FMMT614

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A$	120	300		V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	$I_C=10mA$	100	130		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A$	10	10		V
Collector cutoff current	I_{CBO}	$V_{CB}=100V, I_E=0$		0.02	10	nA
Collector cutoff current	I_{CES}	$V_{CE}=100V, I_E=0$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=8V$			100	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C=500mA, I_B=5mA$ $I_C=100mA, I_B=0.1mA$		0.9 0.78	1.0 0.9	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C=500mA, I_B=5mA$		1.7	1.9	V
Base-emitter voltage *	$V_{BE(ON)}$	$I_C=500mA, V_{CE}=5V$		1.5	1.8	V
DC current gain *	h_{FE}	$I_C=100mA, V_{CE}=5V$	15K			
		$I_C=500mA, V_{CE}=5V$	5K			
Output capacitance	C_{obo}	$V_{CB}=10V, f=100MHz$		6		pF
Switching times	t_{on}	$I_C=100\mu A, V_S=10V$		0.7		μs
	t_{off}	$I_B=0.1mA$		2.5		μs

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

■ Marking

Marking	614
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