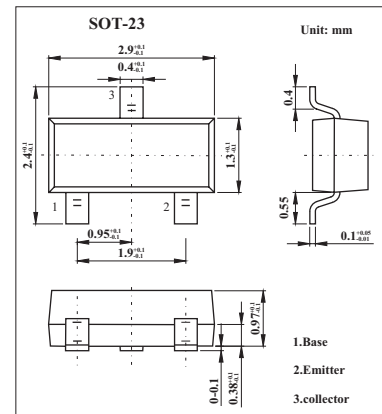


## Power Darlington Transistor

## FMMT634

## ■ Features

- 625mW power dissipation
- Highest current capability SOT23 darlington
- Very high hFE

■ 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	$V_{EB0}$	12	V
Collector current	$I_C$	900	mA
Peak collector current	$I_{CM}$	5	A
Power dissipation	$P_{tot}$	625	mW
Operating and storage temperature range	$T_j, T_{stg}$	-55 to +150	$^\circ\text{C}$

## FMMT634

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	I <sub>C</sub> =100μA	120	170		V
Collector-emitter breakdown voltage *	V(BR)CEO	I <sub>C</sub> =10mA	100	115		V
Emitter-base breakdown voltage	V(BR)EBO	I <sub>E</sub> =100μA	12	16		V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> =80V			10	nA
Collector Emitter Cut-Off Current	I <sub>CES</sub>	V <sub>CE</sub> =80V			100	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =7V			10	nA
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =1mA I <sub>C</sub> =250mA, I <sub>B</sub> =1mA I <sub>C</sub> =500mA, I <sub>B</sub> =5mA I <sub>C</sub> =900mA, I <sub>B</sub> =5mA I <sub>C</sub> =900mA, I <sub>B</sub> =5mA I <sub>C</sub> =1A, I <sub>B</sub> =5mA		0.67 0.72 0.75 0.82 0.68 0.85	0.75 0.80 0.85 0.93 0.96	V
Base-emitter saturation voltage *	V <sub>BE(sat)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =5mA		1.5	1.65	V
Base-emitter voltage *	V <sub>BE(ON)</sub>	I <sub>C</sub> =1A, V <sub>CE</sub> =5V		1.33	1.5	V
Static Forward Current Transfer Ratio*	h <sub>FE</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =5V		50K		
		I <sub>C</sub> =100mA, V <sub>CE</sub> =5V	20K	60K		
		I <sub>C</sub> =1A, V <sub>CE</sub> =5V	15K	14K		
		I <sub>C</sub> =2A, V <sub>CE</sub> =5V	5K	600		
		I <sub>C</sub> =5A, V <sub>CE</sub> =5V		24K		
		I <sub>C</sub> =1A, V <sub>CE</sub> =2V				
Current-gain-bandwidth product	f <sub>T</sub>	I <sub>C</sub> =50mA, V <sub>CE</sub> =10V, f=100MHz		140		MHz
Output capacitance	C <sub>obo</sub>	V <sub>CB</sub> =10V, f=1MHz		9	20	pF
Switching times	t <sub>on</sub>	I <sub>C</sub> =500mA, V <sub>CC</sub> =20V		290		ns
	t <sub>off</sub>	I <sub>B</sub> =±1mA		2.4		μs

\* Pulse test: t<sub>p</sub> = 300 μs; d ≤ 0.02.

## ■ Marking

Marking	634
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