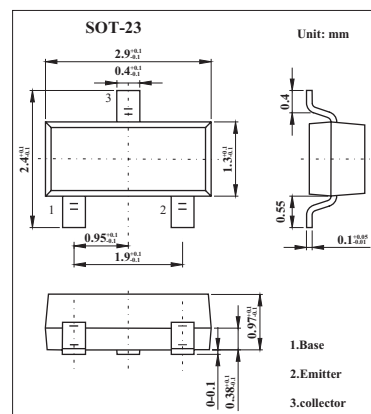


Small Signal Transistor

FMMT5209

■ Features

- Small signal transistor.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	50	V
Collector-emitter voltage	V_{CE0}	50	V
Emitter-base voltage	V_{EB0}	4.5	V
Collector current	I_C	50	mA
Power dissipation	P_{tot}	330	mW
Operating and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base cut-off current	I_{CBO}	$V_{CB}=35\text{V}, I_E=0$			50	nA
Emitter-base current	I_{EBO}	$V_{EB}=3\text{V}, I_C=0$			50	nA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			700	mV
Base-emitter ON voltage	$V_{BE(on)}$	$I_C=1\text{mA}, V_{CE}=5\text{V}$			850	mV
DC current gain	h_{FE}	$I_C=100\mu\text{A}, V_{CE}=5\text{V}$	100		300	
Current-gain-bandwidth product	f_T	$I_C=0.5\text{mA}, V_{CE}=5\text{V}, f=20\text{MHz}$	30			MHz
Small signal current transfer ratio	h_{fe}	$I_C=1\text{mA}, V_{CE}=5\text{V}, f=1\text{KHz}$	150		600	
Noise figure	NF	$I_C=200\mu\text{A}, V_{CE}=5\text{V}, R_g=2\text{K}\Omega, f=30\text{Hz to } 15\text{KHz at } -3\text{dB points}$			3	dB
		$I_C=200\mu\text{A}, V_{CE}=5\text{V}, R_g=2\text{K}\Omega, f=1\text{KHz to } \Delta f=200\text{Hz}$			4	dB
Output capacitance	C_{obo}	$V_{CB}=5\text{V}, I_E=0, f=140\text{KHz}$			4	pF

■ Marking

Marking	2Q
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