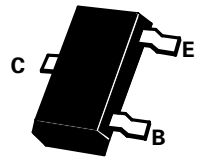
SOT23 NPN SILICON PLANAR SMALL SIGNAL TRANSISTORS

ISSUE 2 - JULY 1995 ✪

FMMT5209 FMMT5210

PARTMARKING DETAILS:
FMMT5209 - 2Q
FMMT5210 - 2R



SOT23

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	FMMT5209	FMMT5210	UNIT
Collector-Base Voltage	V_{CBO}	50		V
Collector-Emitter Voltage	V_{CEO}	50		V
Emitter-Base Voltage	V_{EBO}	4.5		V
Continuous Collector Current	I_C	50		mA
Power Dissipation	P_{tot}	330		mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 TO +150		°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	FMMT5209		FMMT5210		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Cut-Off Current	I_{CBO}		50		50	nA	V_{CB}=35V, I_E=0
Emitter-Base Cut-Off Current	I_{EBO}		50		50	nA	V_{EB}=3V, I_C=0
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		700		700	mV	I_C=10mA, I_B=1mA
Base-Emitter ON Voltage	$V_{BE(on)}$		850		850	mV	I_C=1mA, V_{CE}=5V
Static Forward Current Transfer Ratio	h_{FE}	100	300	200	600		I_C=100μA, V_{CE}=5V
		150		250			I_C=1mA, V_{CE}=5V
		150		250			I_C=10mA, V_{CE}=5V*
Transition Frequency	f_T	30		30		MHz	I_C=0.5mA, V_{CE}=5V, f=20MHz
Small Signal Current Transfer Ratio	h_{fe}	150	600	250	900	MHz	I_C=1mA, V_{CE}=5V, f=1KHz
Noise Figure	N		3		2	dB	I_C=200μA, V_{CE}=5V, R_g=2KΩ, f=30Hz to 15KHz at -3dB points
			4		3	dB	I_C=200μA, V_{CE}=5V, R_g=2KΩ, f=1KHz to Δf=200Hz
Output Capacitance	C_{obo}		4		4	pF	V_{CB}=5V, I_E=0, f=140KHz