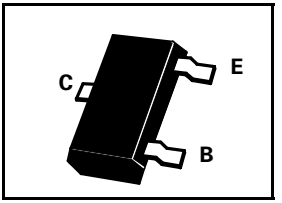
SOT23 NPN SILICON PLANAR SMALL SIGNAL TRANSISTORS

ISSUE 2 - SEPTEMBER 1995

FMMT5088
FMMT5089

PARTMARKING DETAIL— FMMT5088 - 1Q
FMMT5089 - 1R

COMPLEMENTARY TYPES — FMMT5088 - FMMT5087
FMMT5089 - None Available



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	FMMT5088	FMMT5089	UNIT
Collector-Base Voltage	V_{CBO}	35	30	V
Collector-Emitter Voltage	V_{CEO}	30	25	V
Emitter-Base Voltage	V_{EBO}	4.5	4.5	V
Continuous Collector Current	I_C	50	50	mA
Power Dissipation at T_{amb}=25°C	P_{tot}	330	330	mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150		°C

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

		FMMT5088		FMMT5089			
PARAMETER	SYMBOL	MIN.	MAX.	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	35		25		V	I_C=1mA, I_B=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30		30		V	I_C=100μA,I_E=0*
Collector- Base Cut-Off Current	I_{CBO}		50		50	nA nA	V_{CB}=20V, I_E=0 V_{CB}=15V, I_E=0
Emitter-Base Current	I_{EBO}		50		100	nA nA	$V_{EB(off)}$=3V, I_C=0 $V_{EB(off)}$=4.5V, I_C=0
Emitter Saturation Voltages	$V_{CE(sat)}$		0.5		0.5	V	I_C=10mA, I_B=1mA
	$V_{BE(sat)}$		0.8		0.8	V	
Static Forward Current Transfer Ratio	h_{FE}	300 350 300	900	400 450 400	1200		I_C=100μA, V_{CE}=5V I_C=1mA, V_{CE}=5V I_C=10mA, V_{CE}=5V
Transition Frequency	f_T	50		50		MHz	I_C=500μA, V_{CE}=5V f=20MHz
Output Capacitance	C_{obo}		4		4	pF	V_{CB}=5V, f=1MHz, I_E=0
Emitter-base Capacitance	C_{ebo}		10		10	pF	V_{BE}=0.5V, f=1MHz, I_C=0
Noise Figure	N		3		2	dB	I_C=200mA, V_{CE}=5V, R_g=10KΩ, f=10Hz to 15KHz
Small Signal Current Transfer Ratio	h_{fe}	350	1400	450	1800		I_C=1mA, V_{CE}=5V f=1KHz ++

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤2% ++ Periodic Sample test Only
Spice parameter data is available upon request for this device