

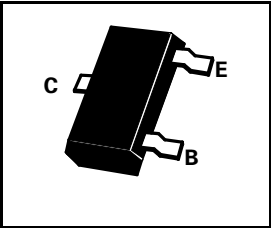
**SOT23 NPN SILICON PLANAR
MEDIUM POWER TRANSISTOR**

FMMT491A

ISSUE 3 – OCTOBER 1995

FEATURES

* Very Low Equivalent Resistance, $R_{CE(sat)}$ **195mΩ at 1A**



COMPLEMENTARY TYPE – FMMT591A
PARTMARKING DETAIL – 41A

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	5	V
Continuous Collector Current	I_C	1	A
Peak Pulse Current	I_{CM}	2	A
Power Dissipation at $T_{amb}=25^{\circ}C$	P_{tot}	500	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	40		V	$I_C=100\mu A$
Collector-Emitter Breakdown Voltage	$V_{CEO(sus)}$	40		V	$I_C=10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		V	$I_E=100\mu A$
Cut-Off Currents	I_{CBO}, I_{CES}		100	nA	$V_{CB}=30V, V_{CES}=30V$
Emitter Cut-Off Current	I_{EBO}		100	nA	$V_{EB}=4V$
Saturation Voltages	$V_{CE(sat)}$		0.3 0.5	V V	$I_C=500mA, I_B=50mA^*$ $I_C=1A, I_B=100mA^*$
	$V_{BE(sat)}$		1.1	V	$I_C=1A, I_B=100mA^*$
Base Emitter Turn On Voltage	$V_{BE(on)}$		1.0	V	$I_C=1A, V_{CE}=5V^*$
Static Forward Current Transfer Ratio	h_{FE}	300 300 200 35	900		$I_C=1mA, V_{CE}=5V^*$ $I_C=500mA, V_{CE}=5V^*$ $I_C=1A, V_{CE}=5V^*$ $I_C=2A, V_{CE}=5V^*$
Transition Frequency	f_T	150		MHz	$I_C=50mA, V_{CE}=10V$ $f=100MHz$
Collector-Base Breakdown Voltage	C_{obo}		10	pF	$V_{CB}=10V, f=1MHz$

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

FMMT491A

TYPICAL CHARACTERISTICS

