



FMMT491

**SOT23 NPN SILICON PLANAR
MEDIUM POWER TRANSISTOR**

ISSUE 3 - OCTOBER 1995

FEATURES

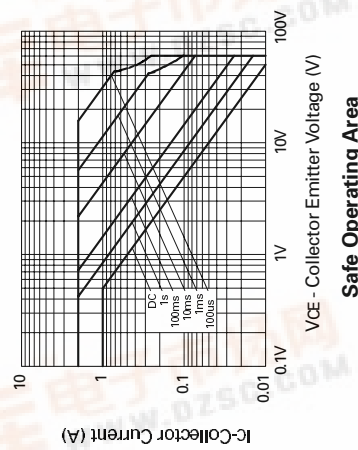
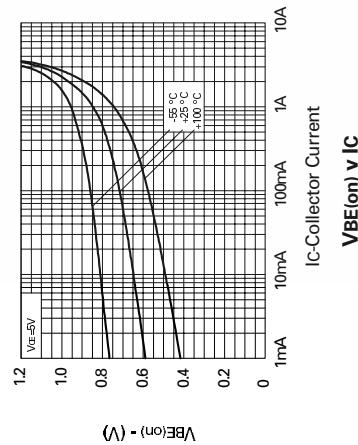
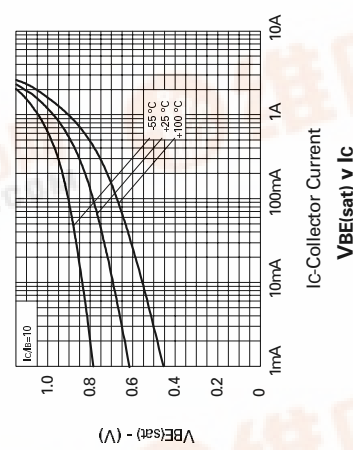
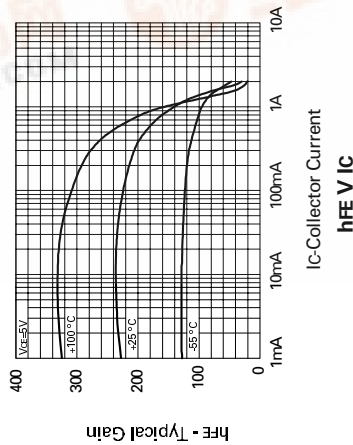
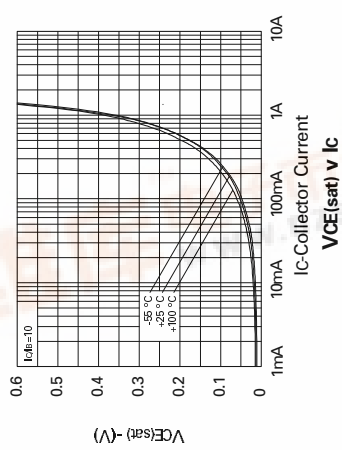
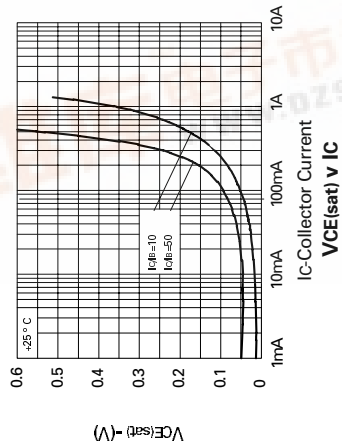
* Low equivalent on-resistance; $R_{CE(sat)}$ 210mΩ at 1A

COMPLEMENTARY TYPE - FMMT591
PARTMARKING DETAIL - 491

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	60	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	$^{\circ}C$

TYPICAL CHARACTERISTICS



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

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	80		V	$I_C=100\mu A$
Collector-Emitter Breakdown Voltage	$V_{CEO(sus)}$	60		V	$I_C=10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		V	$I_E=100\mu A$
Collector Cut-Off Current	I_{CBO}		100	nA	$V_{CB}=60V$
Collector Cut-Off Current	I_{CES}		100	nA	$V_{CES}=60V$
Emitter Cut-Off Current	I_{EBO}		100	nA	$V_{EB}=4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	0.25	0.50	V	$I_C=500mA, I_E=50mA^*$ $I_C=1A, I_E=100mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	1.1		V	$I_C=1A, I_E=100mA^*$
Base-Emitter Turn On Voltage	$V_{BE(on)}$		1.0	V	$I_C=1A, V_{CE}=5V^*$
Static Forward Current Transfer Ratio	h_{FE}	100	300		$I_C=1mA, V_{CE}=5V$ $I_C=500mA, V_{CE}=5V^*$ $I_C=1A, V_{CE}=5V^*$ $I_C=2A, V_{CE}=5V^*$
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%

[查询FMMT491供应商](#)

[捷多邦, 专业PCB打样工厂, 24小时加急出货](#)

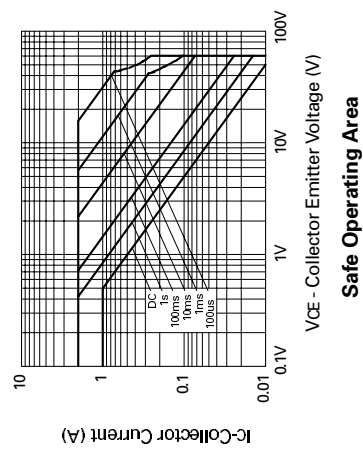
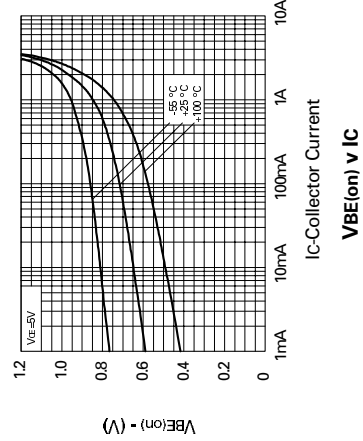
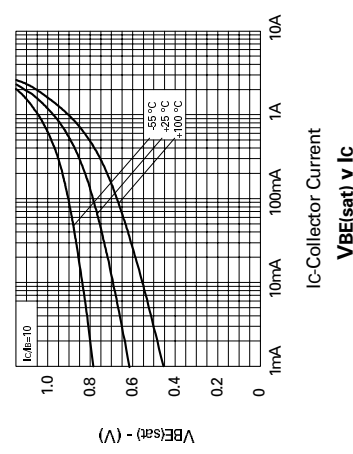
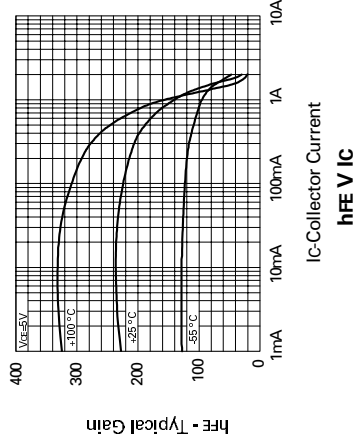
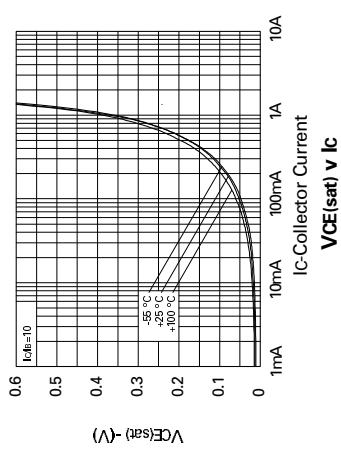
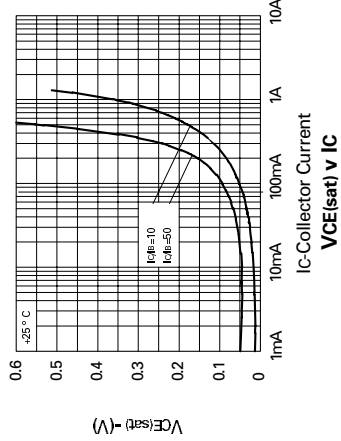
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Collector Cut-Off Current	I_{CBO}		100	nA	$V_{CB}=60\text{V}$
Collector Cut-Off Current	I_{CES}		100	nA	$V_{CES}=60\text{V}$
Emitter Cut-Off Current	I_{EBO}		100	nA	$V_{EB}=4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	0.25	0.50	V	$I_C=500\text{mA}, I_B=50\text{mA}^*$ $I_C=1\text{A}, I_B=100\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	1.1		V	$I_C=1\text{A}, I_B=100\text{mA}^*$
Base-Emitter Turn On Voltage	$V_{BE(on)}$		1.0	V	$I_C=1\text{A}, V_{CE}=5\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	100	300		$I_C=1\text{mA}, V_{CE}=5\text{V}$ $I_C=500\text{mA}, V_{CE}=5\text{V}^*$ $I_C=1\text{A}, V_{CE}=5\text{V}^*$ $I_C=2\text{A}, V_{CE}=5\text{V}^*$
Transition Frequency	f_T	150		MHz	$I_C=50\text{mA}, V_{CE}=10\text{V}$ $f=100\text{MHz}$
Collector-Base Breakdown Voltage	C_{obo}		10	pF	$V_{CB}=10\text{V}, f=1\text{MHz}$

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$



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