

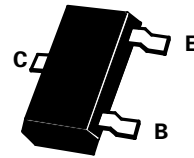
# SOT23 NPN SILICON PLANAR HIGH VOLTAGE TRANSISTORS

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## FMMTA42

PARTMARKING DETAIL – FMMTA42 – 3E  
FMMTA42R – 7E



SOT23

COMPLEMENTARY TYPES – FMMTA42 – FMMTA92

### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	FMMTA42	UNIT
Collector-Base Voltage	$V_{CBO}$	300	V
Collector-Emitter Voltage	$V_{CEO}$	300	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Continuous Collector Current	$I_C$	200	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	330	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.	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	300		200		V	$I_C=100\mu A, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	300		200		V	$I_C=1mA, I_B=0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6		6		V	$I_E=100\mu A, I_C=0$
Collector Cut-Off Current	$I_{CBO}$		0.1		0.1	$\mu A$	$V_{CB}=200V, I_E=0$ $V_{CB}=160V, I_E=0$
Emitter Cut-Off Current	$I_{EBO}$		0.1		0.1	$\mu A$	$V_{EB}=6V, I_C=0$ $V_{EB}=4V, I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.5		0.4	V	$I_C=20mA, I_B=2mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		0.9		0.9	V	$I_C=20mA, I_B=2mA^*$
Static Forward Current Transfer Ratio	$h_{FE}$	25 40 40		25 40 50	200		$I_C=1mA, V_{CE}=10V^*$ $I_C=10mA, V_{CE}=10V^*$ $I_C=30mA, V_{CE}=10V^*$
Transition Frequency	$f_T$	50		50		MHz	$I_C=10mA, V_{CE}=20V$ $f=20MHz$
Output Capacitance	$C_{obo}$		6		8	pF	$V_{CB}=20V, f=1MHz$

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