

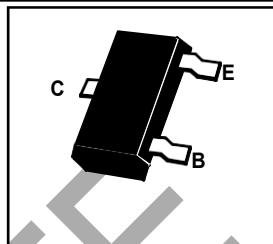
SOT23 NPN SILICON PLANAR DARLINGTON TRANSISTORS

FMMTA12
FMMTA13
FMMTA14

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COMPLEMENTARY TYPES - FMMTA12 - NONE
FMMTA13 - FMMTA63
FMMTA14 - FMMTA64

PARTMARKING DETAILS - FMMTA12 - 3W
FMMTA13 - 1M
FMMTA14 - 1N



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	FMMTA12	FMMTA13/14	UNIT
Collector-Base Voltage	V_{CBO}		40	V
Collector-Emitter Voltage	V_{CEO}		40	V
Collector-Emitter Voltage	V_{CES}	20	40	V
Emitter-Base Voltage	V_{EBO}		10	V
Continuous Collector Current	I_C		300	mA
Power Dissipation at $T_{am} = 25^\circ\text{C}$	P_{tot}		330	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$		-55 to +150	C

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

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Emitter Breakdown Voltage	$V_{(BR)CES}$	20 40		V V	$I_C = 100\mu\text{A}, I_B = 0^*$ $I_C = 100\mu\text{A}, I_B = 0^*$
Collector Cut-Off Current	I_{CES}		100	nA	$V_{CB} = 15\text{V}, V_{BE} = 0$
Collector Cut-Off Current	I_{CBO}		100 100	nA nA	$V_{CB} = 15\text{V}, I_E = 0$ $V_{CB} = 30\text{V}, I_E = 0$
Emitter Cut-Off Current	I_{EBO}		100	nA	$V_{EB} = 10\text{V}, I_C = 0$
Static Forward Current Transfer Ratio	h_{FE}	20K 5K 10K 10K 20K			$I_C = 10\text{mA}, V_{CE} = 5\text{V}^*$ $I_C = 10\text{mA}, V_{CE} = 5\text{V}^*$ $I_C = 100\text{mA}, V_{CE} = 5\text{V}^*$ $I_C = 10\text{mA}, V_{CE} = 5\text{V}^*$ $I_C = 100\text{mA}, V_{CE} = 5\text{V}^*$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		1.0 0.9	V V	$I_C = 10\text{mA}, I_B = 0.01\text{mA}$ $I_C = 100\text{mA}, I_B = 0.1\text{mA}$
Base-Emitter On Voltage	$V_{BE(on)}$		1.4 2.0	V V	$I_C = 10\text{mA}, V_{CE} = 5\text{V}^*$ $I_C = 100\text{mA}, V_{CE} = 5\text{V}^*$

*Measured under pulsed conditions. Pulse width = 300 μs . Duty cycle \leq 2%. Spice parameter data is available upon request for these devices
For typical graphs see FMMT38A datasheet