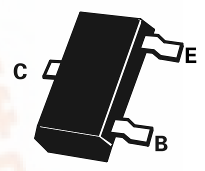
FMMTA12
FMMTA13
FMMTA14

SOT23 NPN SILICON PLANAR DARLINGTON TRANSISTORS

ISSUE 4 - DECEMBER 1996

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_{amb}=25°C	P_{tot}	330		mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150		°C

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

PARAMETER		SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Emitter Breakdown Voltage	FMMTA12 FMMTA13/14	$V_{(BR)CES}$	20 40		V V	I_C=100μA, I_B=0* I_C=100μA, I_B=0*
Collector Cut-Off Current	FMMTA12	I_{CES}		100	nA	V_{CB}=15V, V_{BE}=0
Collector Cut-Off Current	FMMTA12 FMMTA13/14	I_{CBO}		100 100	nA nA	V_{CB}=15V, I_E=0 V_{CB}=30V, I_E=0
Emitter Cut-Off Current		I_{EBO}		100	nA	V_{EB}=10V, I_C=0
Static Forward Current Transfer Ratio	FMMTA12 FMMTA13 FMMTA13 FMMTA14 FMMTA14	h_{FE}	20K 5K 10K 10K 20K			I_C=10mA, V_{CE}=5V* I_C=10mA, V_{CE}=5V* I_C=100mA, V_{CE}=5V* I_C=10mA, V_{CE}=5V* I_C=100mA, V_{CE}=5V*
Collector-Emitter Saturation Voltage	FMMTA12 FMMTA13/14	$V_{CE(sat)}$		1.0 0.9	V V	I_C=10mA, I_B=0.01mA I_C=100mA, I_B=0.1mA
Base-Emitter On Voltage	FMMTA12 FMMTA13/14	$V_{BE(on)}$		1.4 2.0	V V	I_C=10mA, V_{CE}=5V* I_C=100mA,V_{CE}=5V*

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