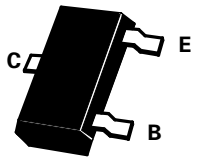
SOT23 PNP SILICON PLANAR GENERAL PURPOSE TRANSISTOR

ISSUE 2 - MARCH 1995 ✪

FMMT4402
FMMT4403

PARTMARKING DETAILS: FMMT4402 - 2K
FMMT4403 - 2L



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	-600	A
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 unless otherwise stated)

		FMMT4402		FMMT4403			
PARAMETER	SYMBOL	MIN.	MAX.	MIN.	MAX.	UNIT	CONDITIONS
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-40		-40		V	IC=-1mA, I_B=0
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-40		-40		V	I_C=-0.1mA, I_E=0
Emitter-Base Breakdown Current	$V_{(BR)EBO}$	-5		-5		V	IE=-0.1mA, I_C=0
Collector-Emitter Cut-Off Current	I_{CEX}		-0.1		-0.1	µA	V_{CE}=-35V $V_{EB(off)}$ =-0.4V
Base Cut-Off Current	I_{BEX}		-0.1		-0.1	µA	V_{CE}=-35V $V_{EB(off)}$ =-0.4V
Static Forward Current TransferRatio	h_{FE}	30 50 50 20	 150	30 60 100 100 20	 300		I_C=-0.1mA, V_{CE}=-1V I_C=-1mA, V_{CE}=-1V I_C=-10mA, V_{CE}=-1V I_C=-150mA,V_{CE}=-2V* I_C=-500mA,V_{CE}=-2V*
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.4 -0.75		-0.4 -0.75	V V	I_C=-150mA,I_B=-15mA* I_C=-500mA,I_B=-50mA*
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-0.75	-0.95 -1.3	-0.75	-0.95 -1.3	V V	I_C=-150mA,I_B=-15mA* I_C=-500mA,I_B=-50mA
Transition Frequency	f_T	150		200		MHz	I_C=-20mA,V_{CE}=-10V f=100MHz
Output Capacitance	C_{obo}		8.5		8.5	pF	V_{CB}=-10 V,I_E=0 f=100kHz
Input Capacitance	C_{ibo}		30		30	pF	V_{BE}=0.5V I_C=0, f=100kHz

*Measured under pulsed conditions. Pulse width=300µs. Duty cycle ≤ 2%

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

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS
Turn-On Time	t_{on}		35	ns	V_{CC}=-30V, $V_{BE(off)}$=-2V I_C=-150mA, I_{B1}=-15mA (See Fig.1)
Turn-Off Time	t_{off}		255	ns	V_{CC}=-30V, I_C=-150mA I_{B1}=I_{B2}=-15mA (See Fig. 2)