

PNP Silicon Epitaxial Planar Transistor

FMMT596

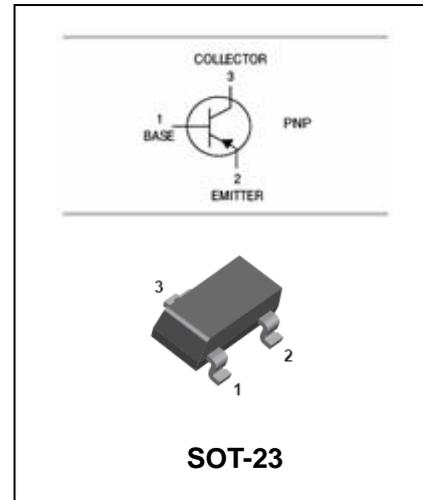
FEATURES

- High saturation voltage.
- Excellent H_{FE} Linearity.



APPLICATIONS

- Switching application.



ORDERING INFORMATION

Type No.	Marking	Package Code
FMMT596	596	SOT-23

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-220	V
V_{CEO}	Collector-Emitter Voltage	-200	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_{CM}	Peak pulse Current	-1	A
I_C	Collector Current -Continuous	-0.3	A
I_B	Base Current	-200	mA
P_{tot}	Power Dissipation	500	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

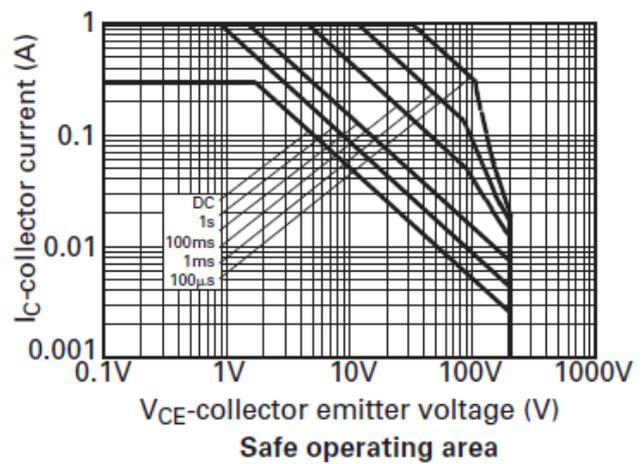
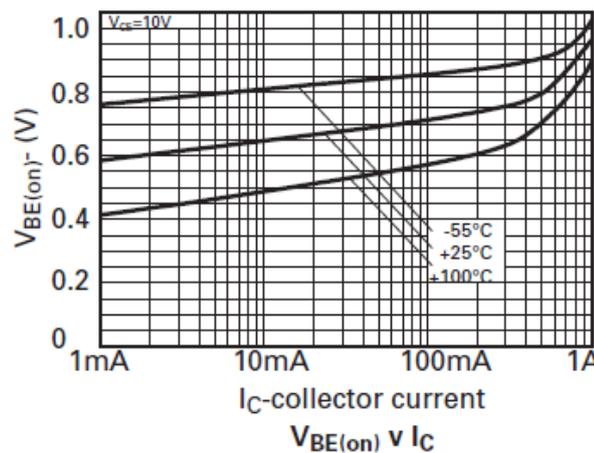
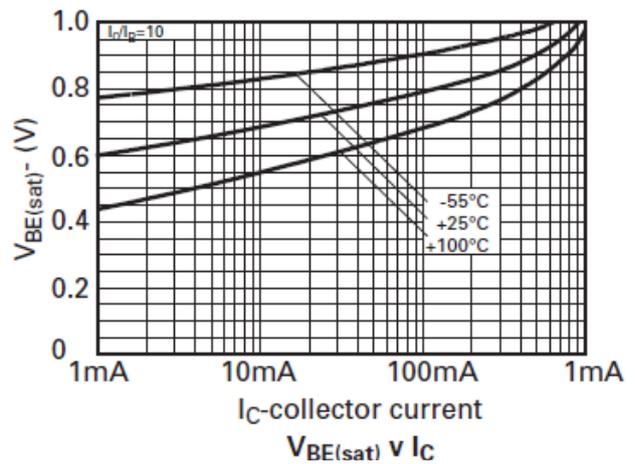
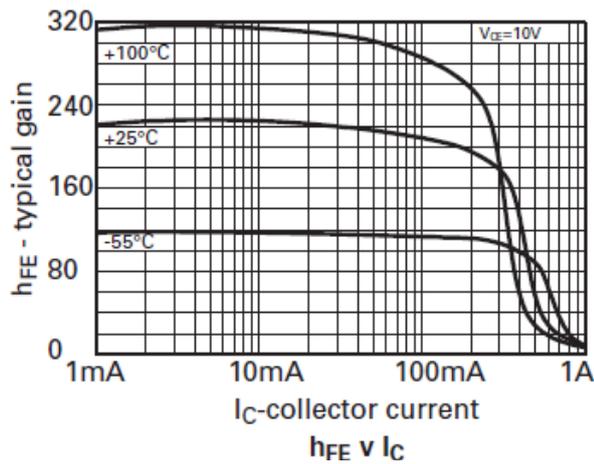
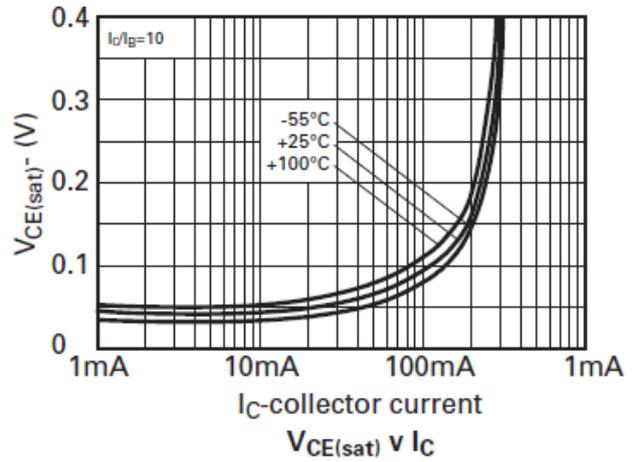
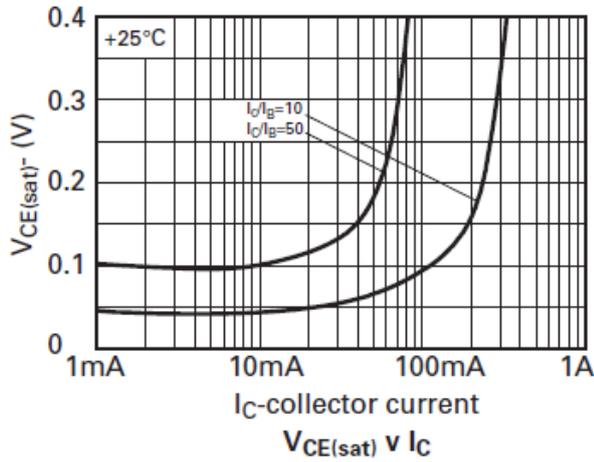
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu A, I_E=0$	-220	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10mA, I_B=0^{(*)}$	-200	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu A, I_C=0$	-5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=-200V, I_E=0$	-	-	-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-4V, I_C=0$	-	-	-0.1	μA
Collector-Emitter saturation current	I_{CES}	$V_{CES}=-200V$	-	-	-0.1	μA
DC current gain	h_{FE}	$V_{CE}=-10V, I_C=-1mA$	100			
		$V_{CE}=-10V, I_C=-100mA^{(*)}$	100	-		
		$V_{CE}=-10V, I_C=-250mA^{(*)}$	85		300	
		$V_{CE}=-10V, I_C=-400mA^{(*)}$	35			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-100mA, I_B=-10mA$	-	-	-0.2	V
		$I_B=-250mA$	-	-	-0.35	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-250mA$	-	-	-1.0	V
Base-emitter turn-on voltage	$V_{BE(on)}$	$I_C=-250mA, V_{CE}=-10V^{(*)}$	-	-	-0.9	V
Transition frequency	f_T	$V_{CE}=-10V, I_C=-50mA$ $f=100MHz$	150	-	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10V, I_E=0, f=1MHz$			10	pF
Switching times	t_d	$I_C=-200mA, V_{CC}=-80V$ $I_{b1}=I_{b2}=-20mA$		22		
	t_r		-	19		
	t_s		-	472		
	t_f		-	70		
Switching times	t_d	$I_C=-100mA, V_{CC}=-80V$ $I_{b1}=I_{b2}=-10mA$		44		
	t_r		-	31		
	t_s		-	665		
	t_f		-	76		

NOTES^(*): Measured under pulsed conditions. Pulse width = 300us. Duty cycle $\leq 2\%$.

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



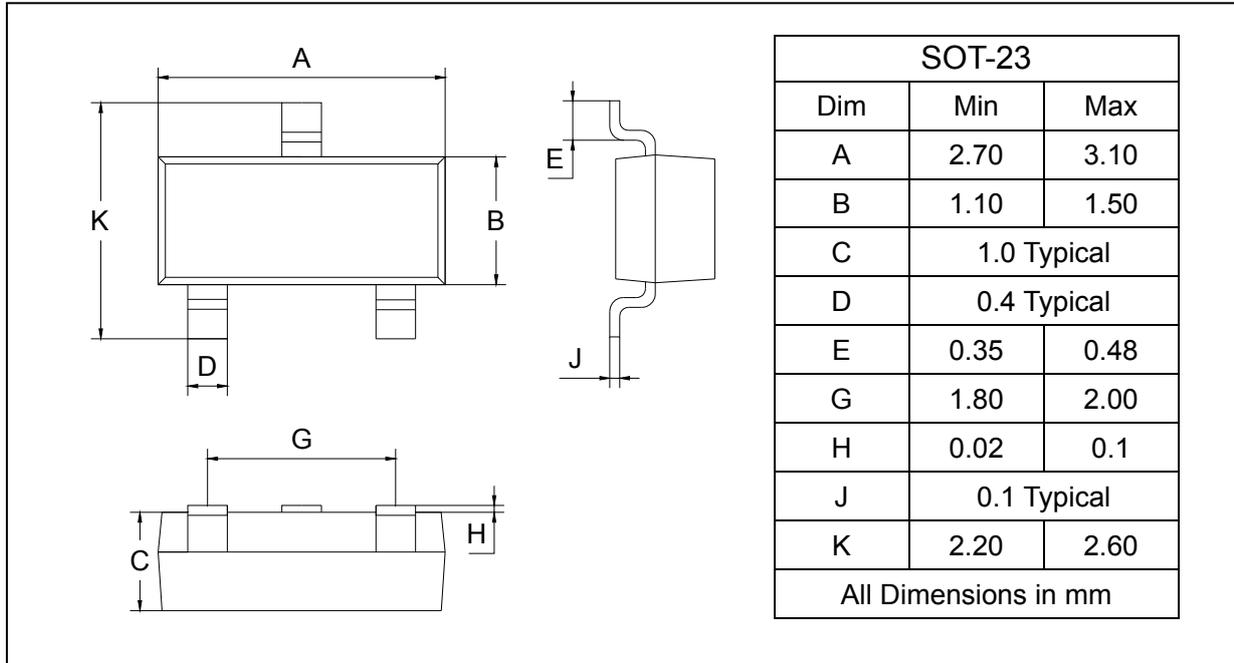
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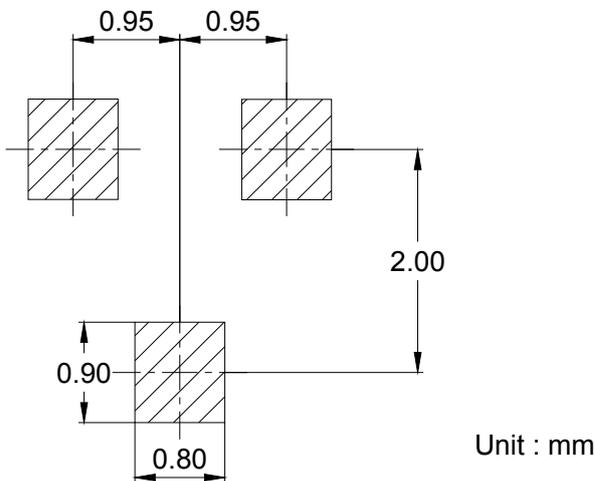
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
FMMT596	SOT-23	3000/Tape&Reel