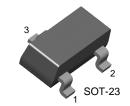


MMBT4403K

PNP Epitaxial Silicon Transistor

Switching Transistor





1. Base 2. Emitter 3. Collector

Absolute Maximum Ratings $T_a = 25$ °C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current	-600	mA
P _C	Collector Power Dissipation	350	mW
T _{STG}	Storage Temperature	150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV _{CBO}	Collector-Base Breakdown Voltage	$I_C = -0.1 \text{mA}, I_E = 0$	-40		V
BV _{CEO}	Collector-Emitter Breakdown Voltage *	$I_C = -1.0 \text{mA}, I_B = 0$	-40		V
BV _{EBO}	Emitter-Base Breakdown Voltage	$I_E = -0.1 \text{mA}, I_C = 0$	-5		V
I _{BEV}	Base Cut-off Current	$V_{CE} = -35V, V_{BE} = -0.4V$		-0.1	μΑ
I _{CEX}	Collector Cut-off Current	$V_{CE} = -35V, V_{BE} = -0.4V$		-0.1	μΑ
h _{FE}	DC Current Gain	$V_{CE} = -1V$, $I_{C} = -0.1$ mA $V_{CE} = -1V$, $I_{C} = -1.0$ mA $V_{CE} = -1V$, $I_{C} = -10$ mA $V_{CE} = -2V$, $I_{C} = -150$ mA * $V_{CE} = -2V$, $I_{C} = -500$ mA *	30 60 100 100 20	300	
V _{CE (sat)}	Collector-Emitter Saturation Voltage *	$I_C = -150$ mA, $I_B = -15$ mA $I_C = -500$ mA, $I_B = -50$ mA		-0.4 -0.75	V V
V _{BE (sat)}	Base-Emitter Saturation Voltage *	I _C = -150mA, I _B = -15mA I _C = -500mA, I _B = -50mA	-0.75	-0.95 -1.3	V V
f _T	Current Gain Bandwidth Product	$I_C = -20 \text{mA}, V_{CE} = -10 \text{V}, f = 100 \text{MHz}$	200		MHz
C _{ob}	Output Capacitance	V _{CB} = -10V, I _E = 0, f = 140KHz		8.5	pF
t _{ON}	Turn On Time	$V_{CC} = -30V, V_{BE} = -2V$ $I_{C} = -150mA, I_{B1} = -15mA$		35	ns
t _{OFF}	Turn Off Time	$V_{CC} = -30V, I_C = -150mA$ $I_{B1} = I_{B2} = -15mA$		255	ns

^{*} Pulse Test: Pulse Width \leq 300 μ s, Duty Cycle \leq 2%

Typical Performance Characteristics

Figure 1. DC current Gain

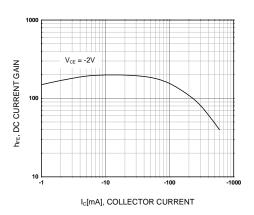


Figure 3. Base-Emitter On Voltage

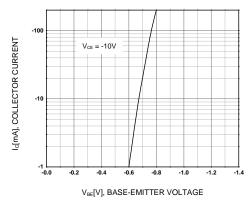
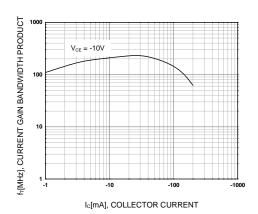


Figure 5. Current Gain Bandwidth Product



MMBT4403K Rev. A

Figure 2. Base-Emitter Saturation Voltage **Collector-Emitter Saturation Voltage**

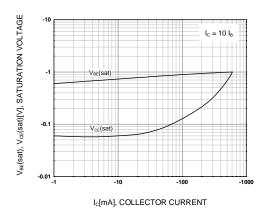
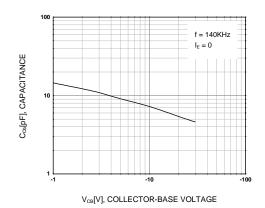


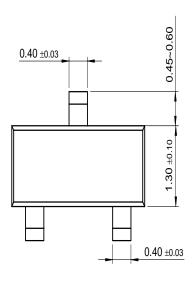
Figure 4. Collector-Base Capacitance

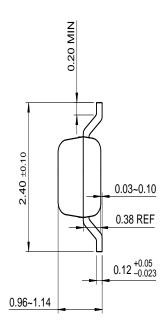


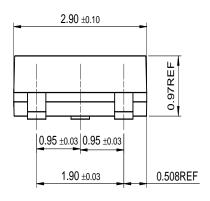
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Mechanical Dimensions

SOT-23







Dimensions in Millimeters

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