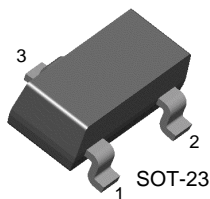


MMBT2907AK

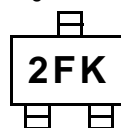
PNP Epitaxial Silicon Transistor

General Purpose Transistor



1. Base 2. Emitter 3. Collector

Marking



Absolute Maximum Ratings $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	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	$^\circ\text{C}$

Electrical Characteristics $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = -10\mu\text{A}, I_E = 0$	-60		V
BV_{CEO}	Collector-Emitter Breakdown Voltage *	$I_C = -10\text{mA}, I_B = 0$	-60		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -10\mu\text{A}, I_C = 0$	-5		V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -50\text{V}, I_E = 0$		-0.01	μA
h_{FE}	DC Current Gain	$V_{CE} = -10\text{V}, I_C = -0.1\text{mA}$ $V_{CE} = -10\text{V}, I_C = -1.0\text{mA}$ $V_{CE} = -10\text{V}, I_C = -10\text{mA}$ $V_{CE} = -10\text{V}, I_C = -150\text{mA}^*$ $V_{CE} = -10\text{V}, I_C = -500\text{mA}^*$	75 100 100 100 50	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage *	$I_C = -150\text{mA}, I_B = -15\text{mA}$ $I_C = -500\text{mA}, I_B = -50\text{mA}$		-0.4 -1.6	V V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage *	$I_C = -150\text{mA}, I_B = -15\text{mA}$ $I_C = -500\text{mA}, I_B = -50\text{mA}$		-1.3 -2.6	V V
f_T	Current Gain Bandwidth Product	$I_C = -50\text{mA}, V_{CE} = -20\text{V}, f = 100\text{MHz}$	200		MHz
C_{ob}	Output Capacitance	$V_{CB} = -10\text{V}, I_E = 0, f = 1.0\text{MHz}$		8	pF
t_{ON}	Turn On Time	$V_{CC} = -30\text{V}, I_C = -150\text{mA}$ $I_{B1} = -15\text{mA}$		50	ns
t_{OFF}	Turn Off Time	$V_{CC} = -6\text{V}, I_C = -150\text{mA}$ $I_{B1} = I_{B2} = -15\text{mA}$		110	ns

* Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Typical Performance Characteristics

Figure 1. DC current Gain

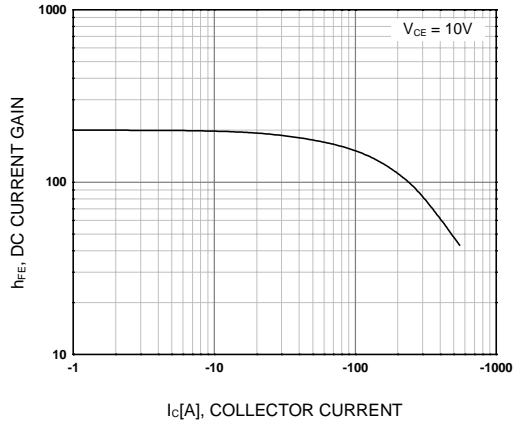


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

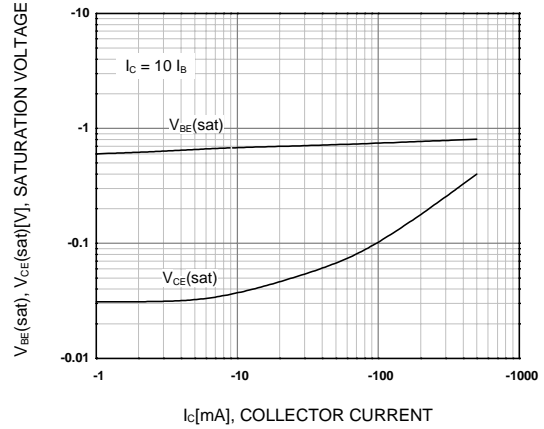


Figure 3. Output Capacitance

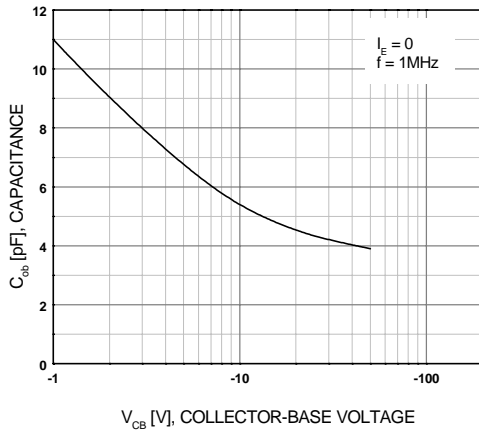
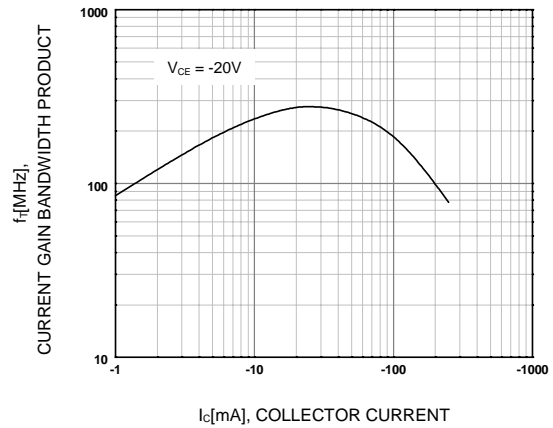
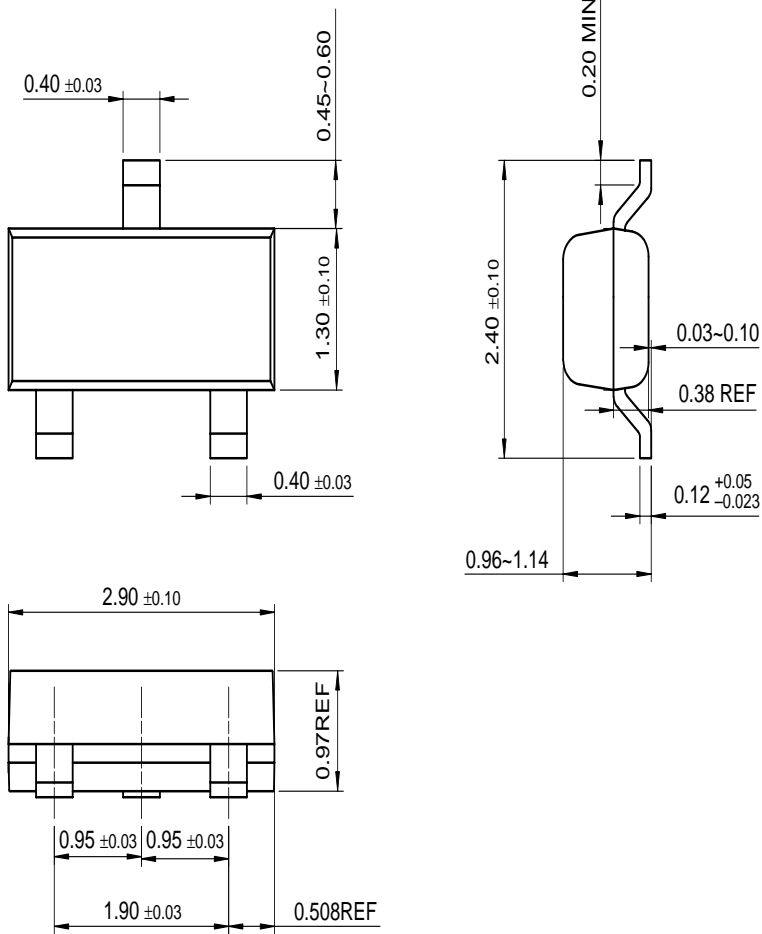


Figure 4. Current Gain Bandwidth Product



Mechanical Dimensions

SOT-23



Dimensions in Millimeters

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E ² CMOS™	I ² C™	MSX™	QT Optoelectronics™	TinyLogic®
EnSigna™	<i>i-Lo</i> ™	MSXPro™	Quiet Series™	TINYOPTO™
FACT™	ImpliedDisconnect™	OCX™	RapidConfigure™	TruTranslation™
FACT Quiet Series™		OCXPro™	RapidConnect™	UHC™
Across the board. Around the world.™		OPTOLOGIC®	μSerDes™	UltraFET®
The Power Franchise®		OPTOPLANAR™	SILENT SWITCHER®	UniFET™
Programmable Active Droop™		PACMAN™	SMART START™	VCX™

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