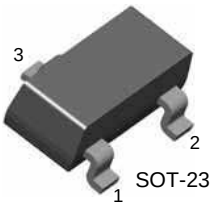
FAIRCHILD SEMICONDUCTOR®

MMBT2907AK

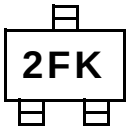
PNP Epitaxial Silicon Transistor

General Purpose Transistor



1. Base 2. Emitter 3. Collector

Marking



Absolute Maximum Ratings T_a = 25°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
$T_{J,}$ T_{STG}	Operating Junction and Storage Temperature Range	-55 ~ 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 = -10μA, I_E = 0	-60		V
BV_{CEO}	Collector-Emitter Breakdown Voltage *	I_C = -10mA, I_B = 0	-60		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = -10μA, I_C = 0	-5		V
I_{CBO}	Collector Cut-off Current	V_{CB} = -50V, I_E = 0		-0.01	μA
h_{FE}	DC Current Gain	V_{CE} = -10V, I_C = -0.1mA V_{CE} = -10V, I_C = -1.0mA V_{CE} = -10V, I_C = -10mA V_{CE} = -10V, I_C = -150mA * V_{CE} = -10V, I_C = -500mA *	75 100 100 100 50	 300 	
V_{CE} (sat)	Collector-Emitter Saturation Voltage *	I_C = -150mA, I_B = -15mA I_C = -500mA, I_B = -50mA		-0.4 -1.6	V V
V_{BE} (sat)	Base-Emitter Saturation Voltage *	I_C = -150mA, I_B = -15mA I_C = -500mA, I_B = -50mA		-1.3 -2.6	V V
f_T	Current Gain Bandwidth Product	I_C = -50mA, V_{CE} = -20V, f = 100MHz	200		MHz
C_{ob}	Output Capacitance	V_{CB} = -10V, I_E = 0, f = 1.0MHz		8	pF
t_{ON}	Turn On Time	V_{CC} = -30V, I_C = -150mA I_{B1} = -15mA		50	ns
t_{OFF}	Turn Off Time	V_{CC} = -6V, I_C = -150mA I_{B1} = I_{B2} = -15mA		110	ns

* Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%

Typical Performance Characteristics

Figure 1. DC current Gain

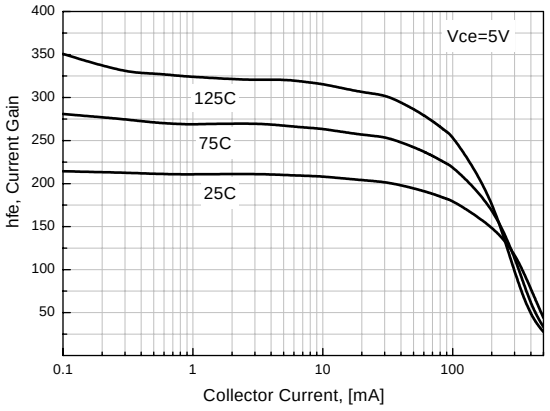


Figure 2. Collector-Emitter Saturation Voltage

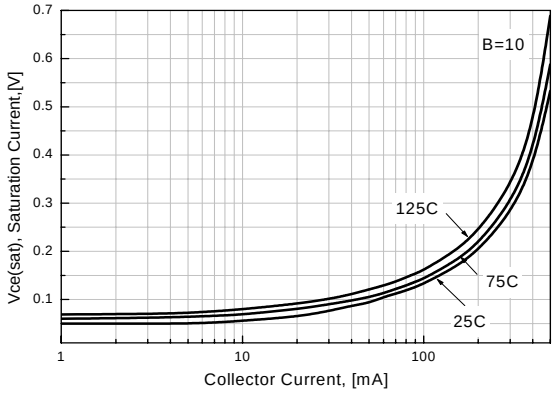


Figure 3. Base-Emitter Saturation Voltage

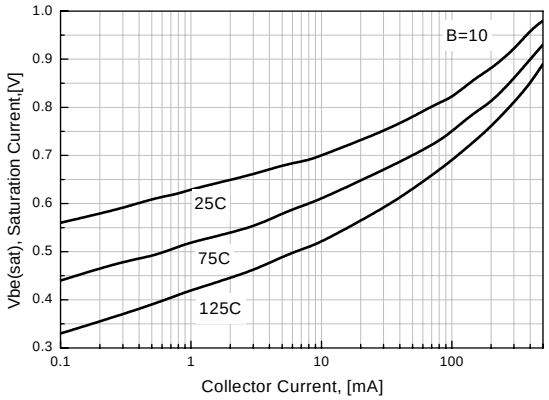


Figure 4. Collector - Base Leakage Current

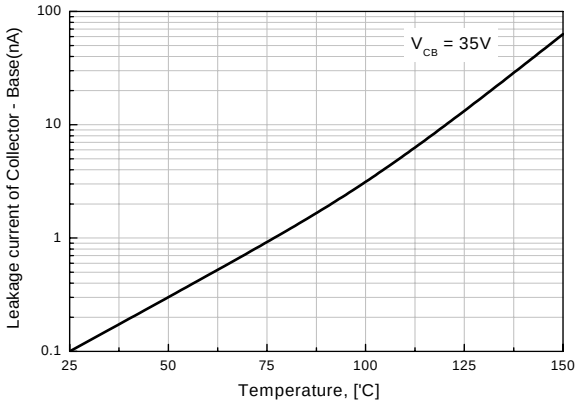


Figure 5. Output Capacitance

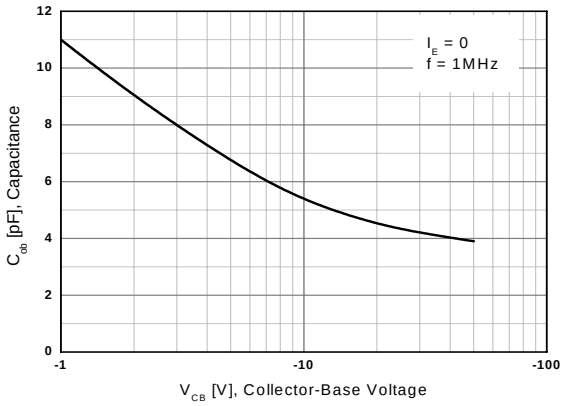
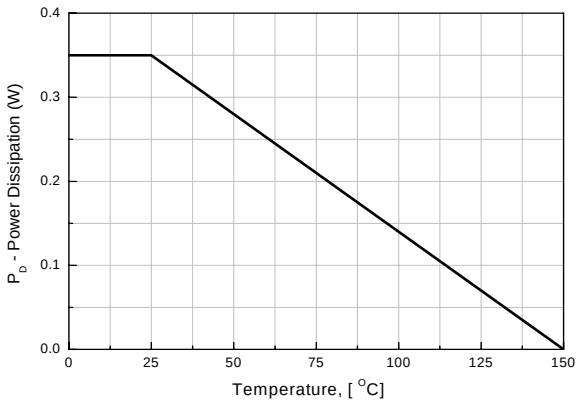
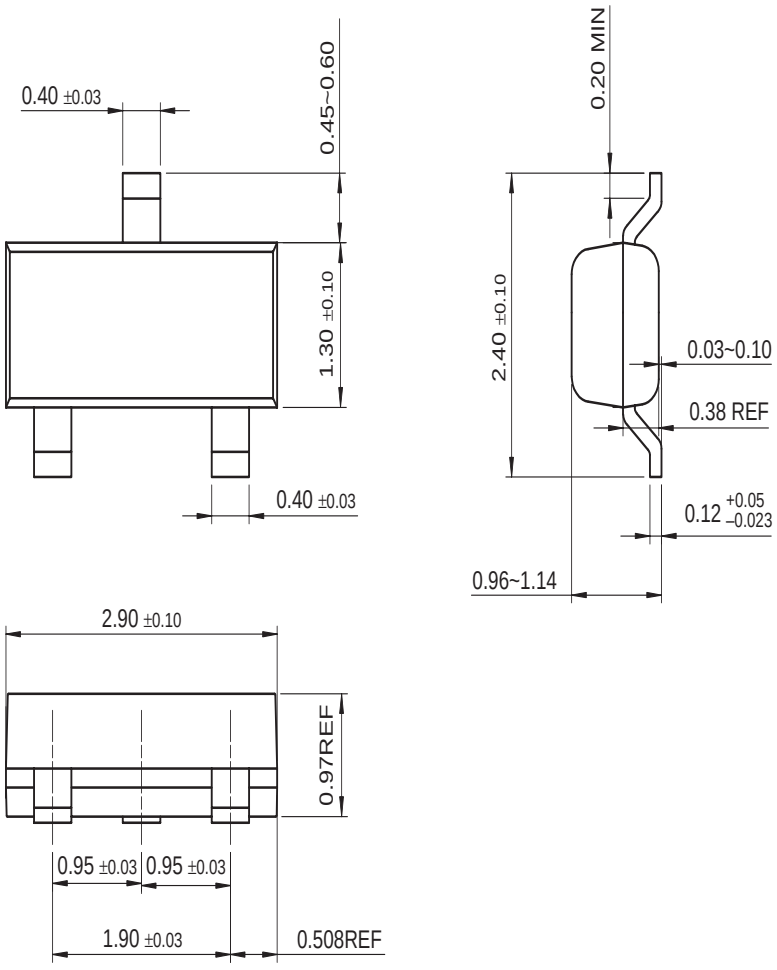


Figure 6. Power Dissipation vs Ambient Temperature



Mechanical Dimensions

SOT-23



Dimensions in Millimeters

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