



Formosa MS

# FORMOSA MICROSEMI CO., LTD.

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## FMBT3906

PNP EPITAXIAL PLANAR TRANSISTOR

### Description

The FMBT3906 is designed for general purpose switching and amplifier applications.

### Absolute Maximum Ratings

#### ? Maximum Temperatures

Storage Temperature ..... -55 ~ +150 ?C

Junction Temperature ..... +150 ?C

#### ? Maximum Power Dissipation

Total Power Dissipation (Ta=25?C) ..... 225 mW

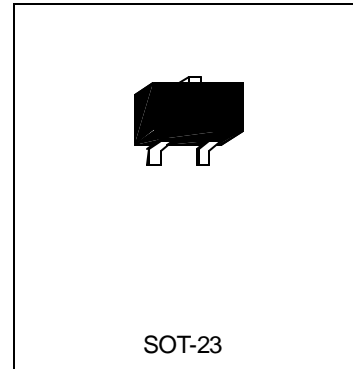
#### ? Maximum Voltages and Currents (Ta=25?C)

VCBO Collector to Base Voltage ..... -40 V

VCEO Collector to Emitter Voltage ..... -40 V

VEBO Emitter to Base Voltage ..... -5 V

IC Collector Current ..... -200 mA



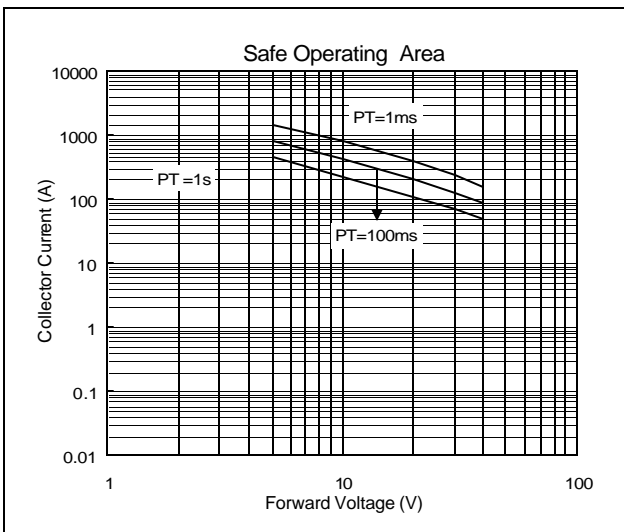
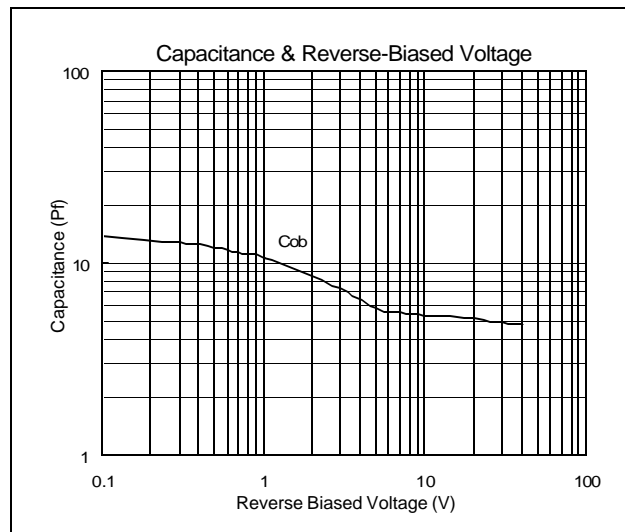
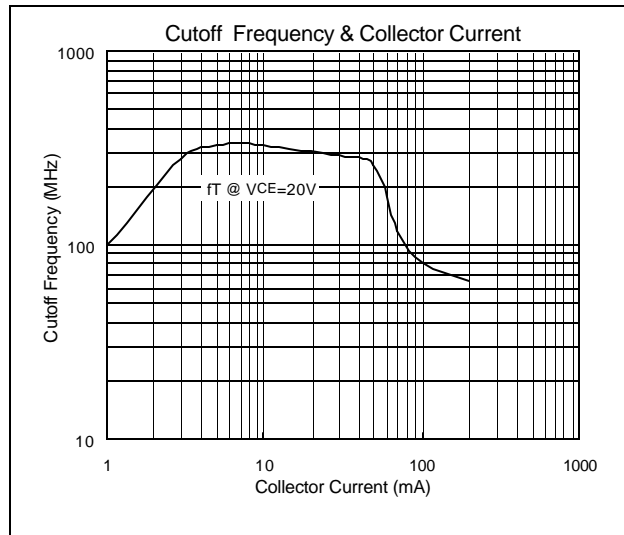
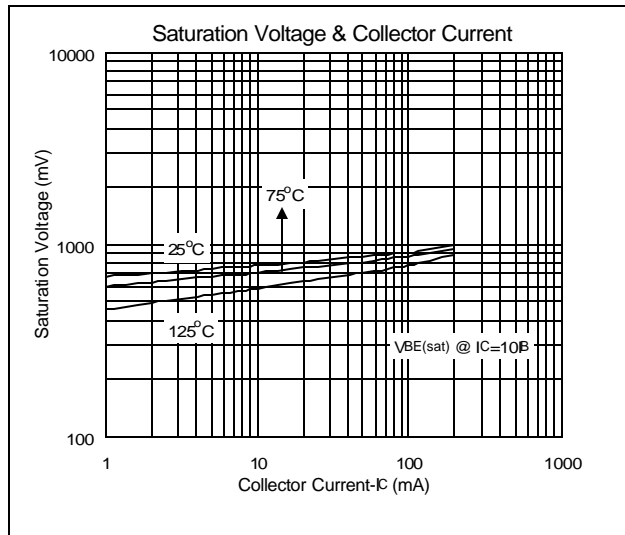
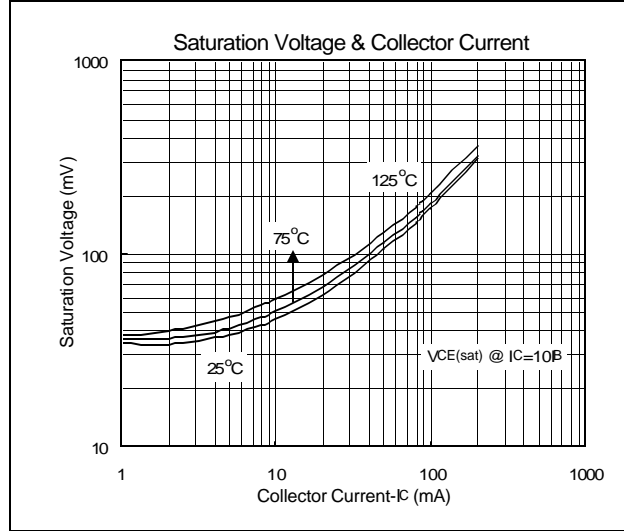
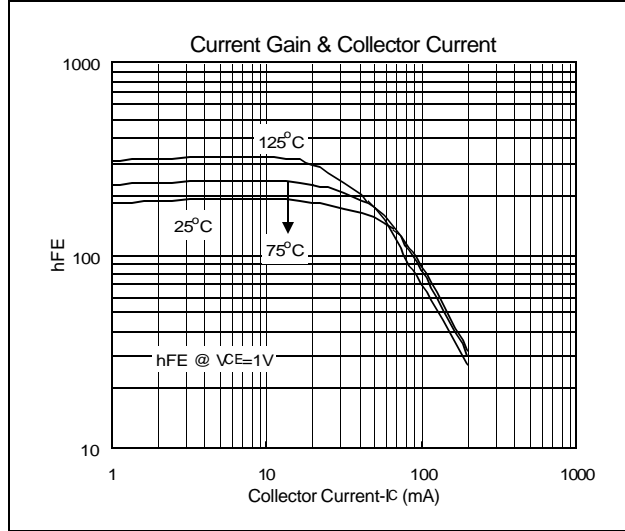
### Characteristics (Ta=25?C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	-40	-	-	V	IC=-10uA
BVCEO	-40	-	-	V	IC=-1mA
BVEBO	-5	-	-	V	IC=-10uA
ICEX	-	-	-50	nA	VCE=-30V, VBE=-3V
*VCE(sat)1	-	-	-0.25	V	IC=-10mA, IB=-1mA
*VCE(sat)2	-	-0.2	-0.4	V	IC=-50mA, IB=-5mA
*VBE(sat)1	-0.65	-	-0.85	V	IC=-10mA, IB=-1mA
*VBE(sat)2	-	-0.84	-0.95	V	IC=-50mA, IB=-5mA
*hFE1	60	-	-		VCE=-1V, IC=-0.1mA
*hFE2	80	-	-		VCE=-1V, IC=-1mA
*hFE3	100	-	300		VCE=-1V, IC=-10mA
*hFE4	60	-	-		VCE=-1V, IC=-50mA
*hFE5	30	-	-		VCE=-1V, IC=-100mA
fT	250	-	-	MHz	VCE=-20V, IC=-10mA, f=100MHz
Cob	-	-	4.5	pF	VCB=-5V, f=1MHz

\*Pulse Test: Pulse Width ?380us, Duty Cycle? 2%

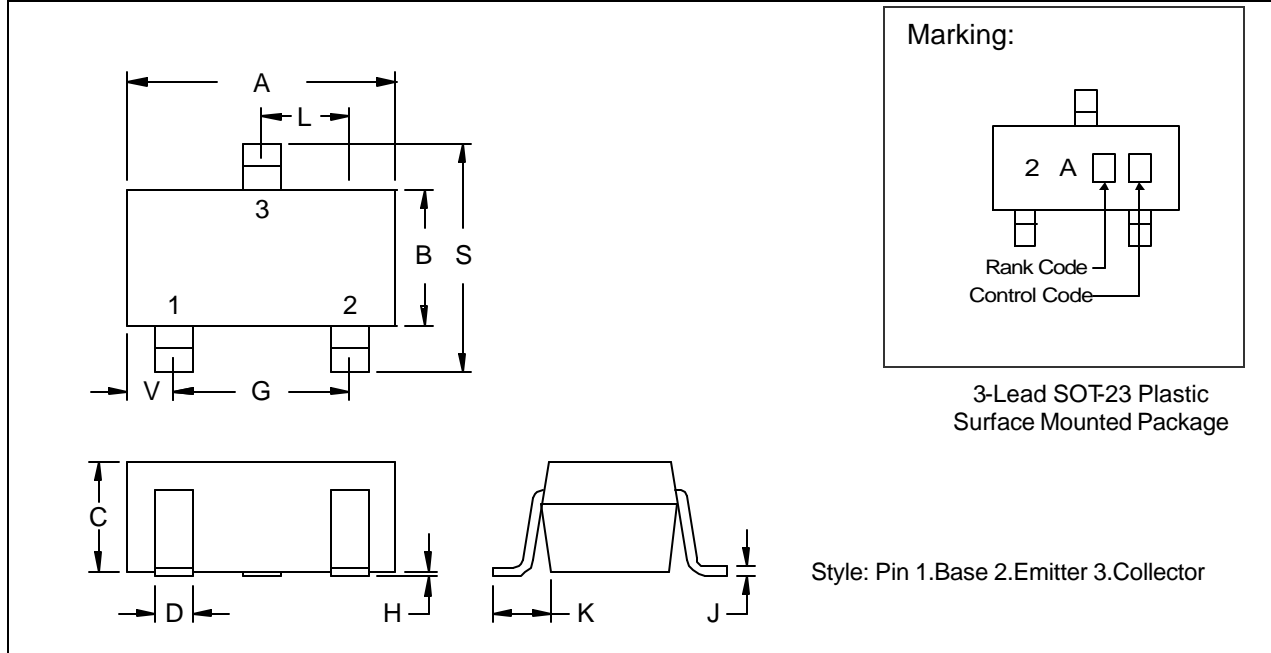


### Characteristics Curve





**SOT-23 Dimension**



\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.085	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

- Notes: 1.Dimension and tolerance based on our Spec.  
 2.Controlling dimension: millimeters.  
 3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 4.If there is any question with packing specification or packing method, please contact your local FORMOSA MS sales office.

**Material:**

- ? Lead: 42 Alloy; solderplating
- ? Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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