

# MMBT2907AW

Rev.F Aug.-2018

## / Descriptions

Silicon PNP transistor in a SOT-323 Plastic Package.

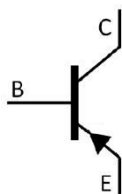
## / Features

Low power surface mount applications.

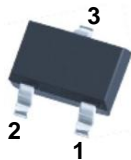
## / Applications

General purpose amplifier.

## / Equivalent Circuit



## / Pinning



PIN1 Emitter      PIN 2 Base      PIN 3 Collector

## / Marking

$h_{FE}$ Range	100~300
Marking	H2F

## / Absolute Maximum Ratings(Ta=25 )

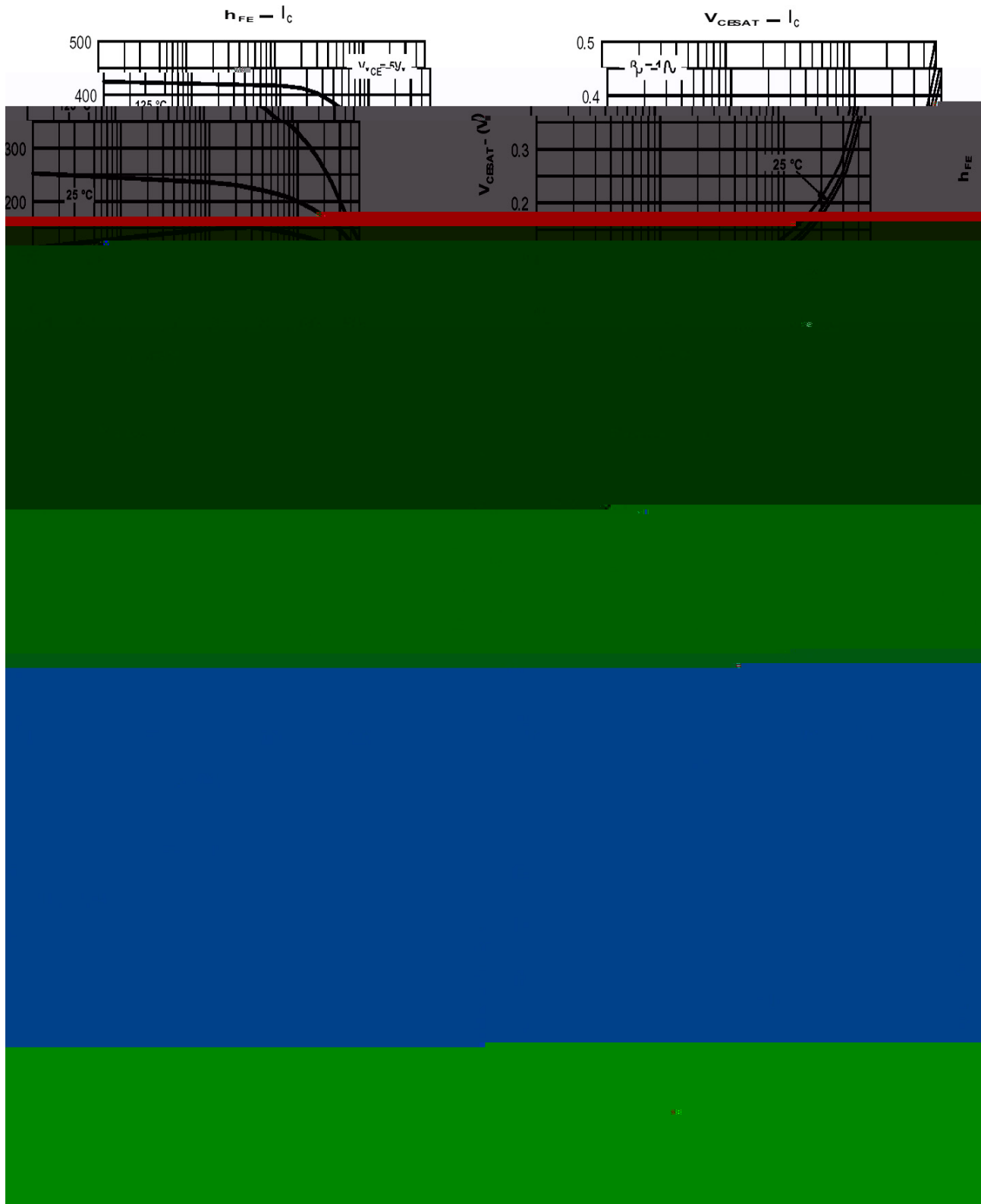
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-60	V
Collector to Emitter Voltage	$V_{CEO}$	-60	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current - Continuous	$I_C$	-600	mA
Collector Power Dissipation	$P_C$	200	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C

## / Electrical Characteristics(Ta=25 )

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=-10\mu A$ $I_E=0$	-60			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=-10mA$ $I_B=0$	-60			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=-10\mu A$ $I_C=0$	-5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-50V$ $I_E=0$			-0.01	$\mu A$
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-10V$ $I_C=-150mA^*$	100		300	
	$h_{FE(2)}$	$V_{CE}=-10V$ $I_C=-500mA^*$	50			
	$h_{FE(3)}$	$V_{CE}=-10V$ $I_C=-10mA$	100			
	$h_{FE(4)}$	$V_{CE}=-10V$ $I_C=-1.0mA$	100			
	$h_{FE(5)}$	$V_{CE}=-10V$ $I_C=-0.1mA$	75			
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=-150mA$ $I_B=-15mA$			-0.4	V
	$V_{CE(sat)(2)}$	$I_C=-500mA$ $I_B=-50mA$			-1.6	V
Base to Emitter Saturation Voltage	$V_{BE(sat)(1)}$	$I_C=-150mA$ $I_B=-15mA$			-1.3	V
	$V_{BE(sat)(2)}$	$I_C=-500mA$ $I_B=-50mA$			-2.6	V
Transition Frequency	$f_T$	$V_{CE}=-20V$ $f=100MHz$ $I_C=-50mA$	200			MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10V$ $f=1.0MHz$ $I_E=0$			8.0	pF
Turn-On Time	$t_{on}$	$V_{CC}=-30V$ $I_C=-150mA$ $I_{B1}=-15mA$			50	ns
Turn-Off Time	$t_{off}$	$V_{CC}=-6.0V$ $I_C=-150mA$ $I_{B1}=I_{B2}=-15mA$			110	ns

\*Pulse Test: Pulse Width 300 s, Duty Cycle 2.0%

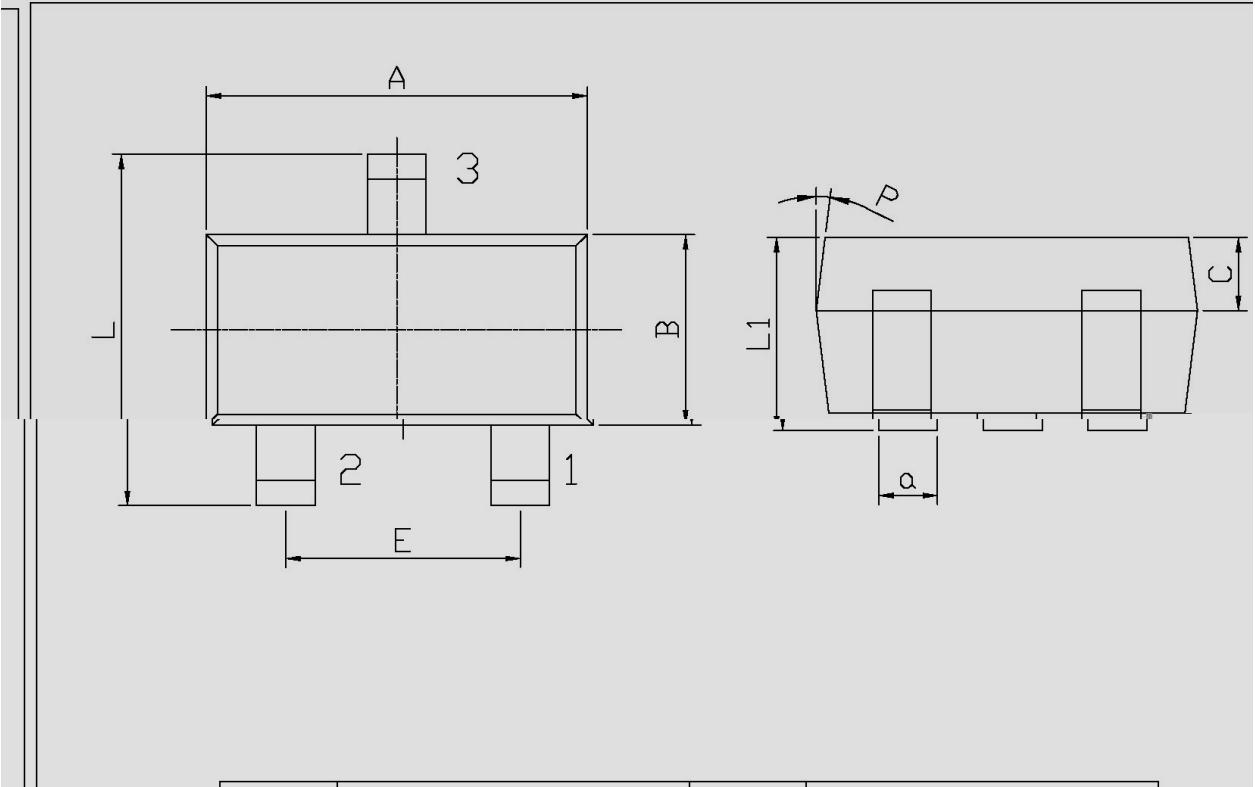
/ Electrical Characteristic Curve



/ Package Dimensions

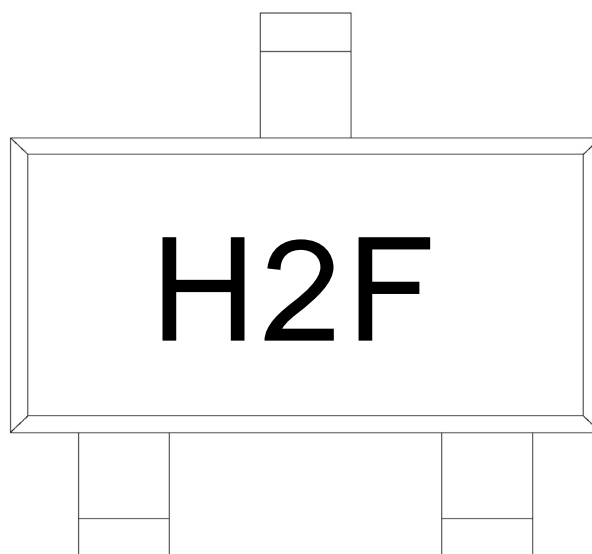
STP-323

单位: mm



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min.	Max.	Symbol	Min.	Max.
A	1.95	2.35	C	0.30	0.50

/ Marking Instructions



H

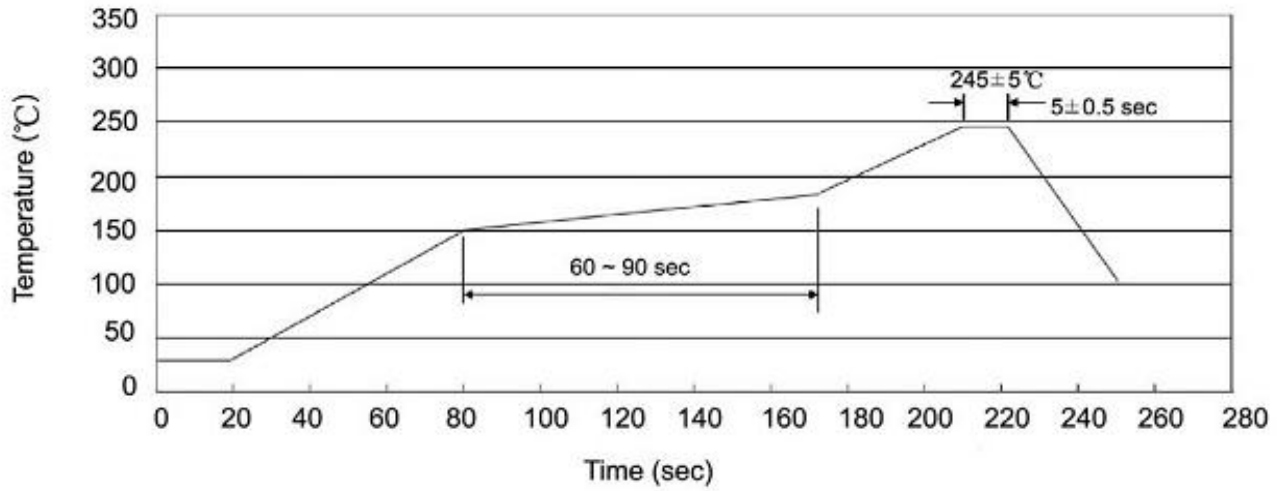
2F

Note:

H: Company Code.

2F: Product Type.

( ) /



Note:

- |   |     |     |    |          |   |
|---|-----|-----|----|----------|---|
| 1 | 150 | 180 | 60 | 90sec;   | 1.Preheating:150~180 , Time:60~90sec.   |
| 2 | 245 | 5   | 5  | 0.5sec;  | 2.Peak Temp.:245 5 , Duration:5 0.5sec. |
| 3 |     |     | 2  | 10 /sec. | 3. Cooling Speed: 2~10 /sec.            |

/ Resistance to Soldering Heat Test Conditions

260 5                      10 1 sec.                      Temp.:260±5°C                      Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱	盒 箱		
						"		

/ Notices