

MMBT4403W

Rev.E Sep.-2016

描述 / Descriptions

SOT-323 塑封封装 PNP 半导体三极管。Silicon PNP transistor in a SOT-323 Plastic Package.

特征 / Features

当用于普通放大及开关电路，集电极电流可达 500mA。

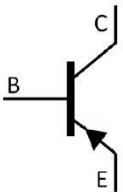
Medium power amplifier and switch requiring collector currents up to 500 mA.

用途 / Applications

用于普通放大及开关电路。

Medium power amplifier and switch requiring.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Emitter

PIN 2 : Base

PIN 3 : Collector

印章代码 / Marking

Marking	2TH
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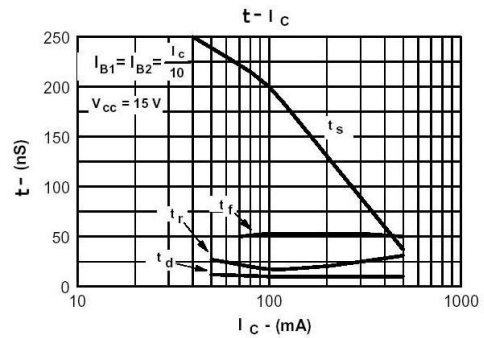
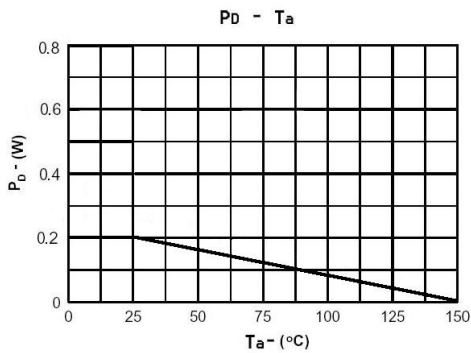
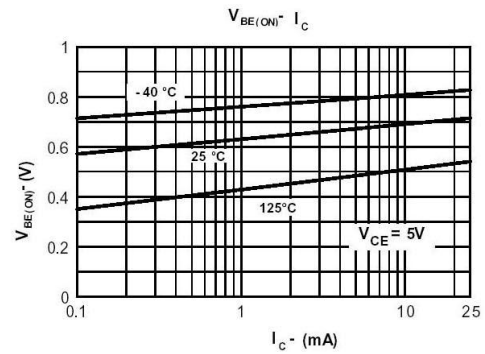
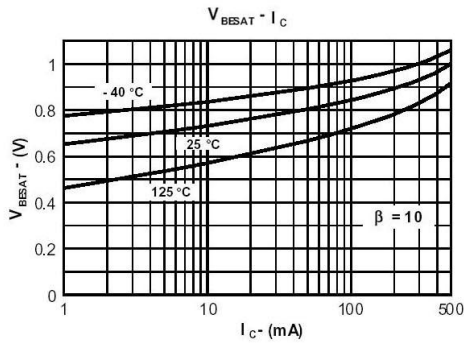
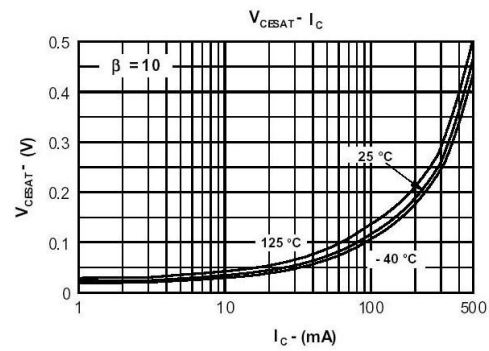
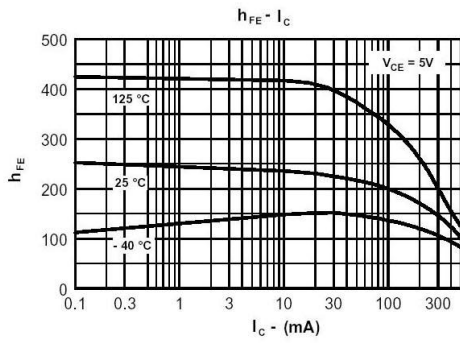
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	-40	V
Collector to Emitter Voltage	V_{CEO}	-40	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

电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-1.0mA$ $I_B=0$	-40			V
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=-0.1mA$ $I_E=0$	-40			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-0.1mA$ $I_C=0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-40V$ $I_E=0$			-50	nA
Emitter to Base Current	I_{EBO}	$V_{EB}=-5V$ $I_C=0$			-50	nA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-2.0V$ $I_C=-150mA$	100		300	
	$h_{FE(2)}$	$V_{CE}=-1.0V$ $I_C=-0.1mA$	30			
	$h_{FE(3)}$	$V_{CE}=-1.0V$ $I_C=-1.0mA$	60			
	$h_{FE(4)}$	$V_{CE}=-1.0V$ $I_C=-10mA$	100			
	$h_{FE(5)}$	$V_{CE}=-2.0V$ $I_C=-500mA$	20			
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=-150mA$ $I_B=-15mA$			-0.4	V
	$V_{CE(sat)(2)}$	$I_C=-500mA$ $I_B=-50mA$			-0.75	V
Base to Emitter Saturation Voltage	$V_{BE(sat)(1)}$	$I_C=-150mA$ $I_B=-15mA$	-0.75		-0.95	V
	$V_{BE(sat)(2)}$	$I_C=-500mA$ $I_B=-50mA$			-1.3	V
Transition Frequency	f_T	$V_{CE}=-10V$ $I_C=-20mA$ $f=100MHz$	200			MHz
Delay Time	t_d	$V_{CC}=-30V$ $I_C=-150mA$			15	ns
Rise Time	t_r	$I_{B1}=-15mA$			20	ns
Storage Time	t_s	$V_{CC}=-30V$ $I_C=-150mA$			225	ns
Fall Time	t_f	$I_{B1}=I_{B2}=-15mA$			30	ns

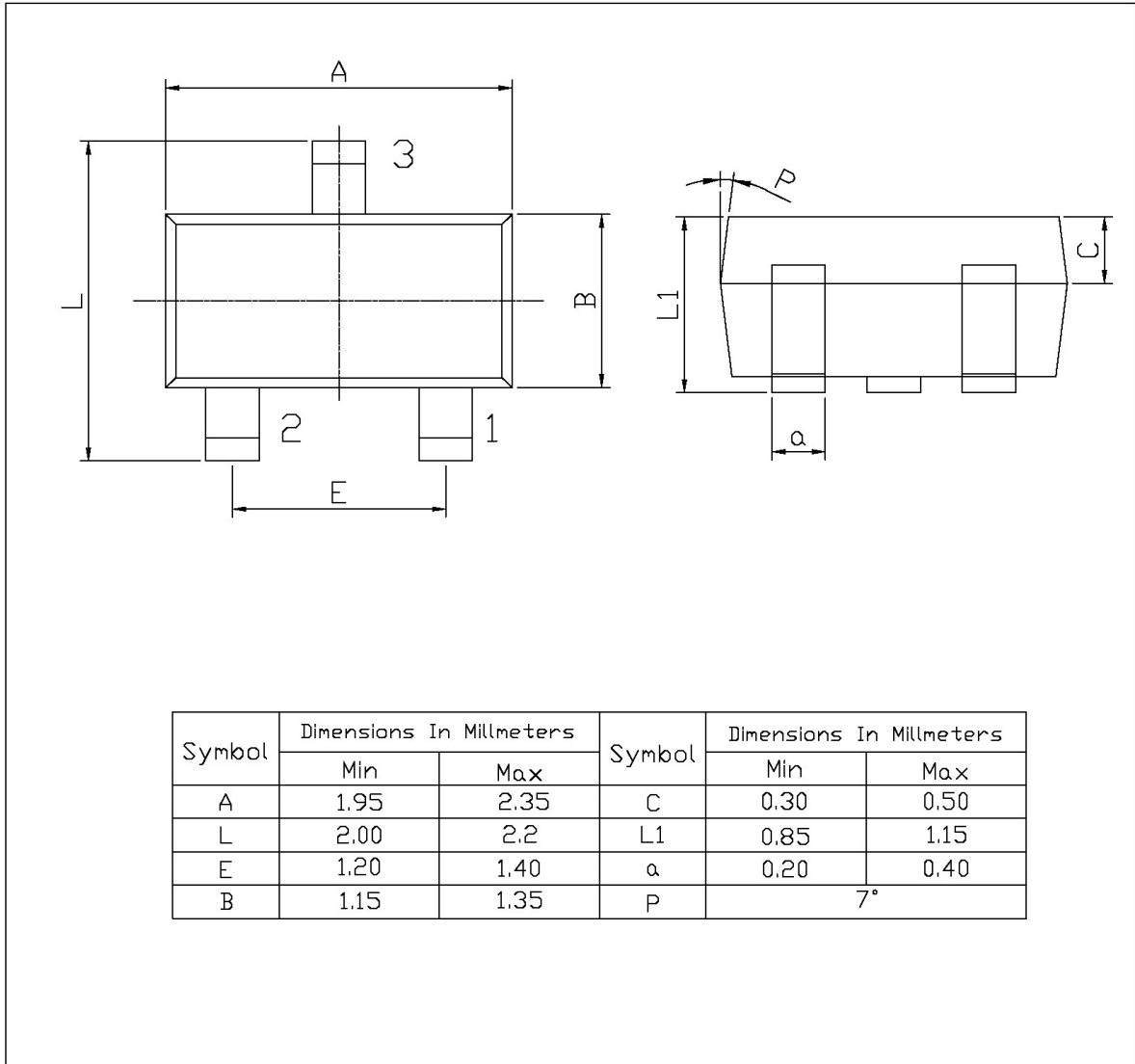
电参数曲线图 / Electrical Characteristic Curve



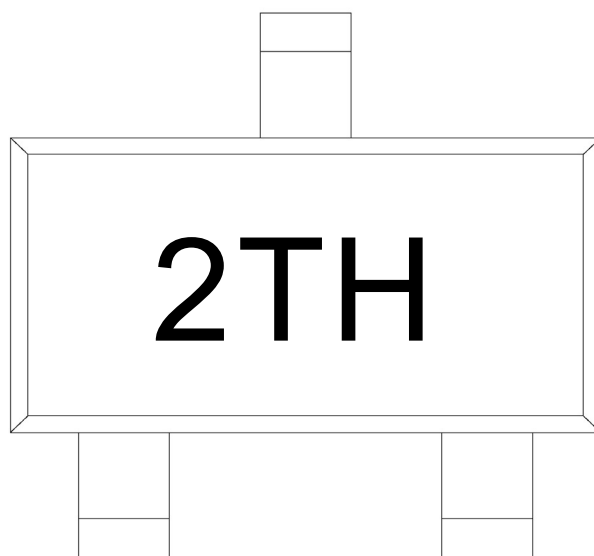
外形尺寸图 / Package Dimensions

SOT-323

单位: mm



印章说明 / Marking Instructions



说明：

2T： 为型号代码

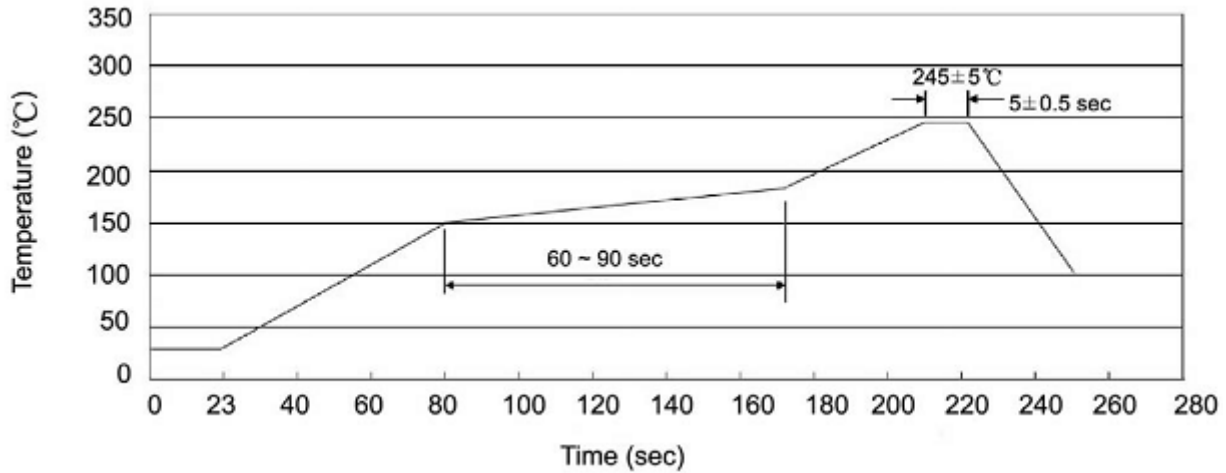
H： 为公司代码

Note:

2T: Product Type.

H: Company Code.

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 25~150°C，时间 60~90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2~10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C 时间：10±1 sec.

Temp.:260±5°C Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT-323	3,000	10	30,000	6	180,000	7" x8	180×120×180	390×385×205

使用说明 / Notices