

/ Descriptions

SOT-323 PNP Silicon PNP transistor in a SOT-323 Plastic Package.

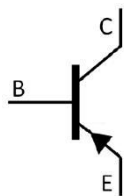
/ Features

MMBTA42W
High voltage, low saturation voltage, low collector output capacitance , complementary pair with MMBTA42W.

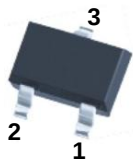
/ Applications

High voltage control circuit.

/ Equivalent Circuit



/ Pinning



PIN1 Emitter PIN 2 Base PIN 3 Collector

/ Marking

Marking	H2D
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/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-300	V
Collector to Emitter Voltage	V_{CEO}	-300	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-500	mA
Collector Power Dissipation	P_C	250	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

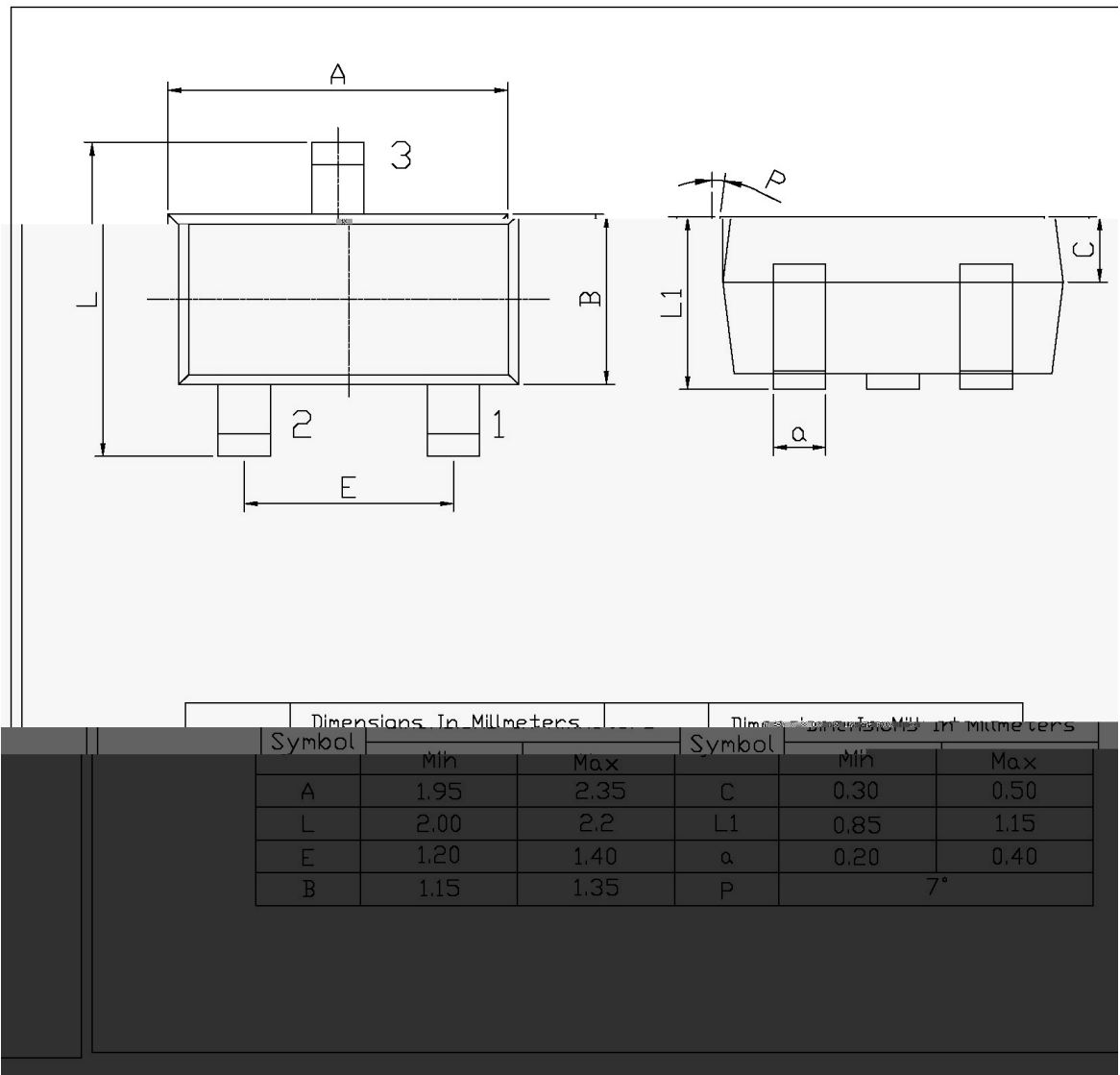
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C = -100\mu A$ $I_E = 0$	-300			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C = -1.0mA$ $I_B = 0$	-300			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E = -100\mu A$ $I_C = 0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -200V$ $I_E = 0$			-0.25	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{BE} = -3.0V$ $I_C = 0$			-0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -10V$ $I_C = -10mA$	40			
	$h_{FE(2)}$	$V_{CE} = -10V$ $I_C = -30mA$	25			
	$h_{FE(3)}$	$V_{CE} = -10V$ $I_C = -1.0mA$	25			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -20mA$ $I_B = -2.0mA$			-0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -20mA$ $I_B = -2.0mA$			-0.9	V
Transition Frequency	f_T	$V_{CE} = -20V$ $I_C = -10mA$ $f = 100MHz$	50			MHz
Collector output capacitance	C_{ob}	$V_{CB} = -20V$ $f = 1.0MHz$ $I_E = 0$			6.0	pF

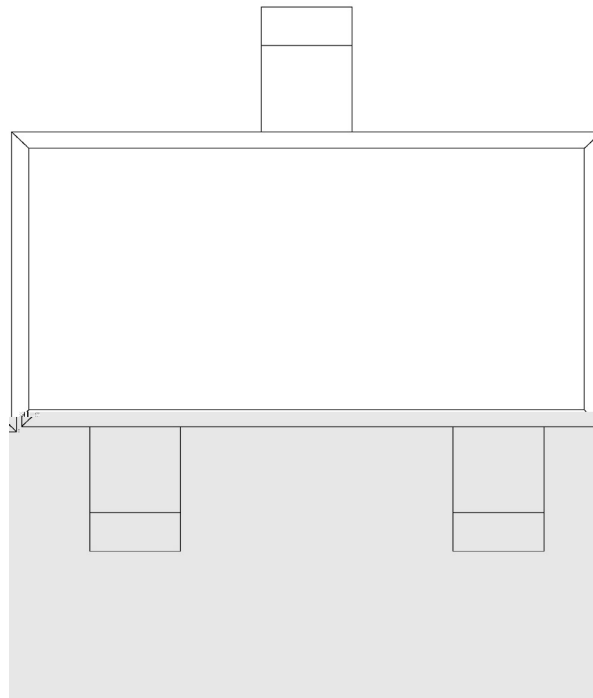
/ Package Dimensions

SOT-323

单位: mm

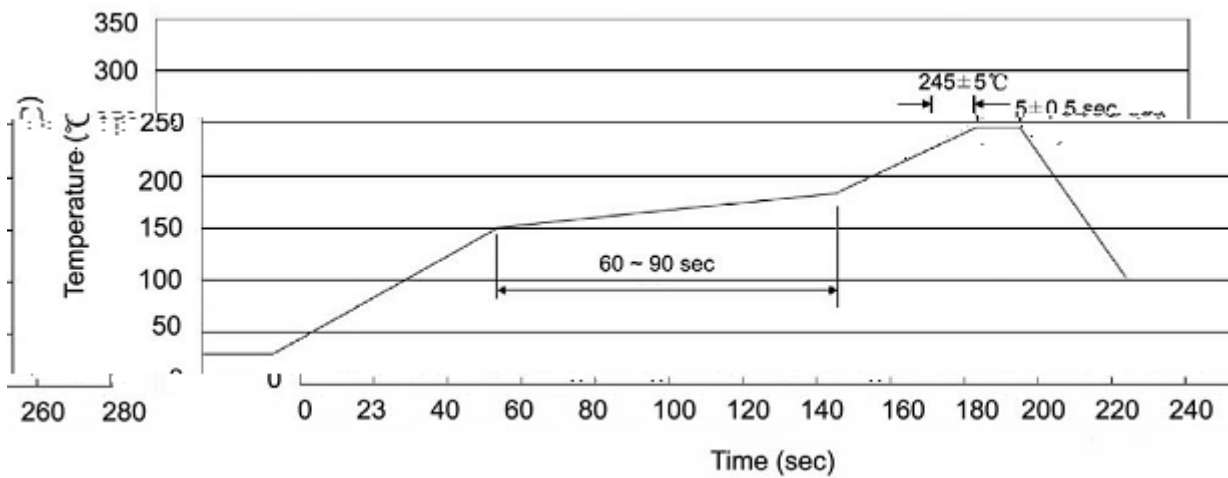


/ Marking Instructions



H

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-----------|---|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , 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℃ Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units/Reel	Reels/Inner Box	Units	Dimension	(unit mm ³)
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