

MMBTA94T

Rev.F Apr.-2019

5 é / Descriptions

9 5 : .> // x 6 4 6 ! - } â 'ož Silicon PNP transistor in a SOT-89 Plastic Package.

α a / Features

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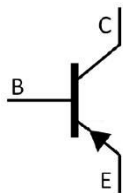
High voltage.

Đ ÷ / Applications

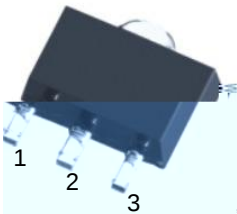
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High voltage control circuit.

Ã W] Ô · / Equivalent Circuit



• Ũ - æ / Pinning



PIN1 y Base

PIN 2 y Collector

PIN 3 y Emitter

, M V / Marking

Marking	H4D *
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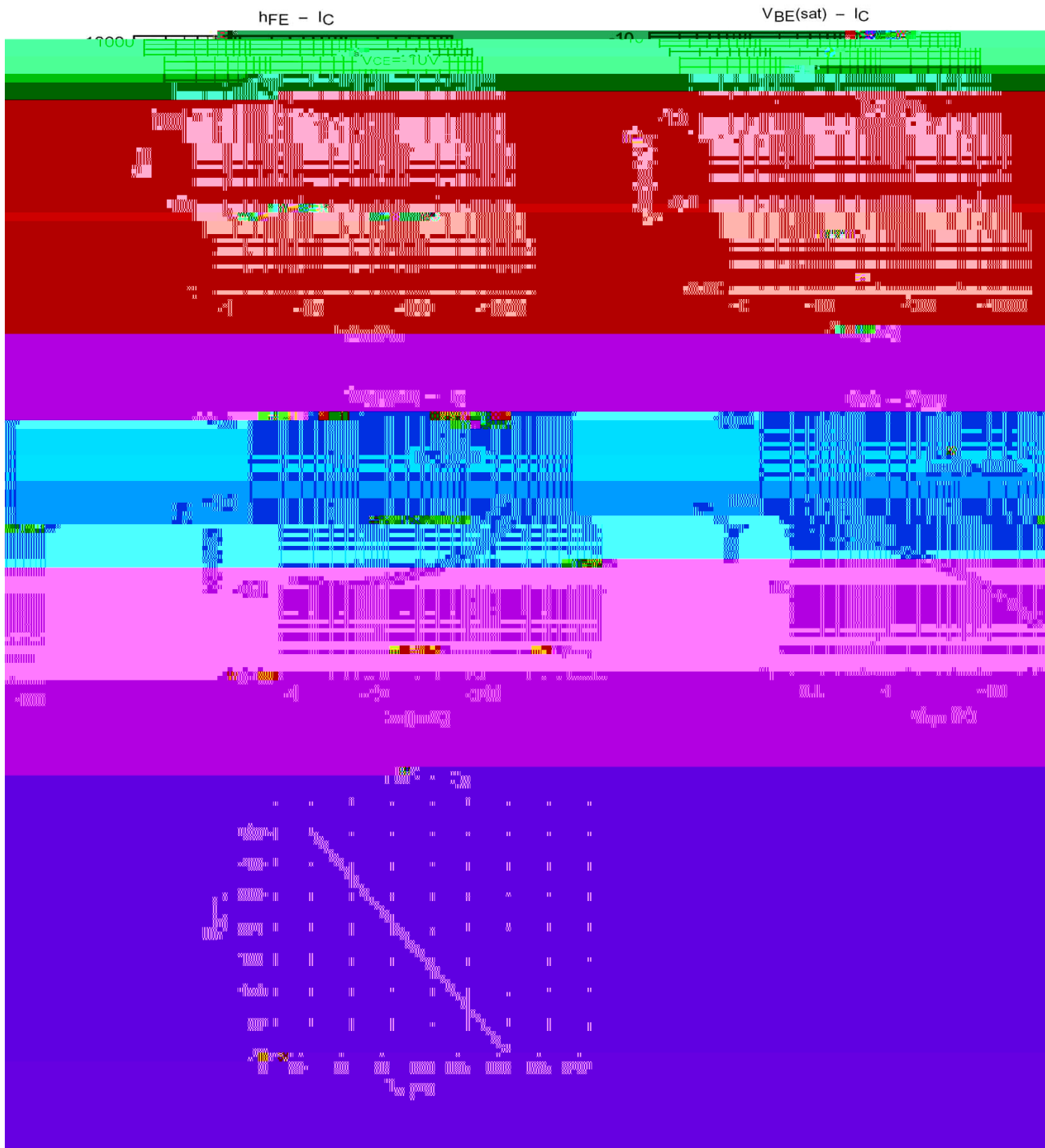
Table 1 / Absolute Maximum Ratings(Ta=25 °C ;)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-400	V
Collector to Emitter Voltage	V_{CEO}	-400	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-300	mA
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 ~ 150	

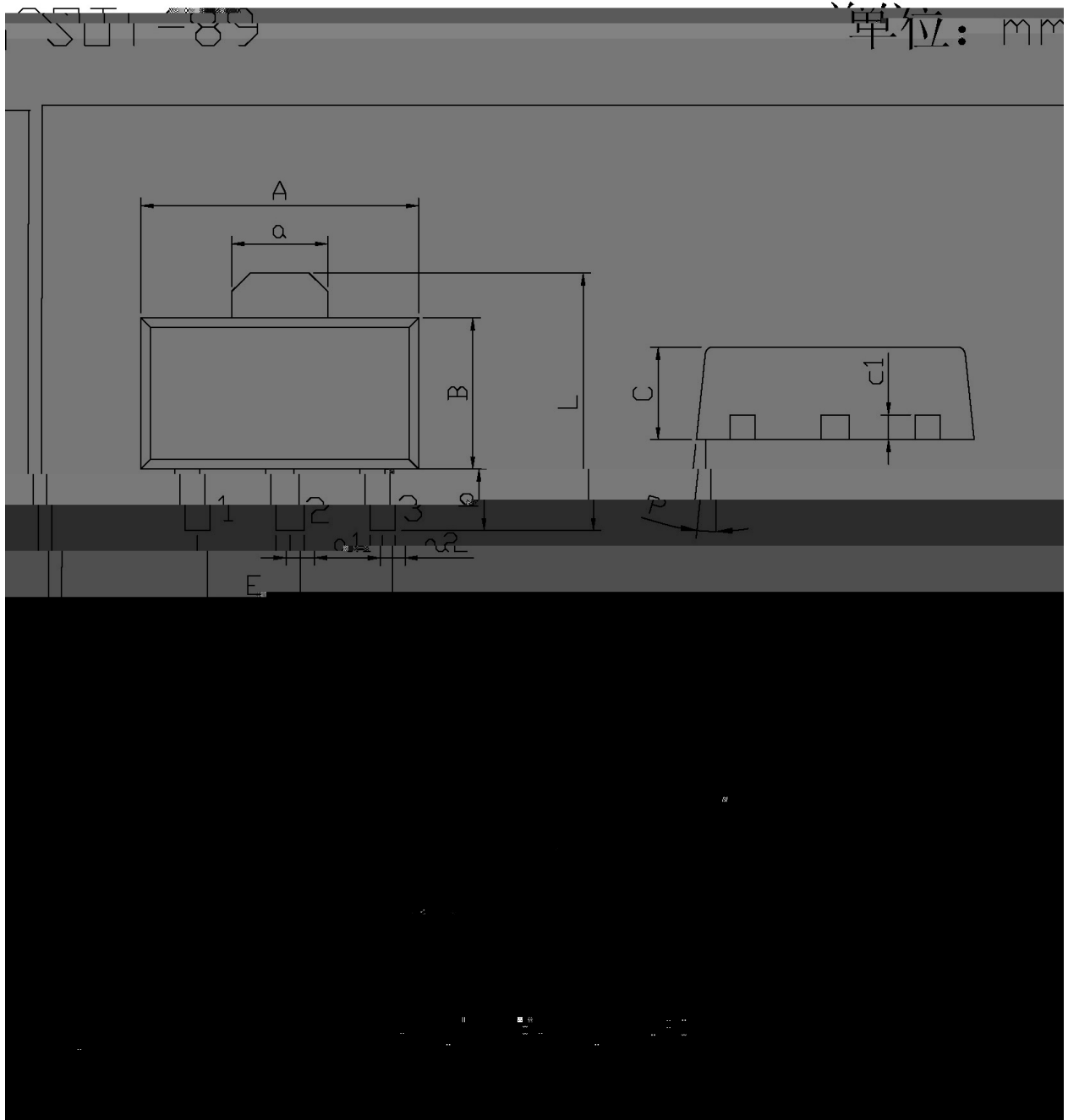
Table 2 / Electrical Characteristics(Ta=25 °C ;)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C = -100 \mu A$ $I_E = 0$	-400			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C = -1.0mA$ $I_B = 0$	-400			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}	$V_{CB} = -300V$ $I_E = 0$			-0.1	μA
Emitter Cut-Off Current	I_{CES}	$V_{CE} = -400V$ $V_{BE} = 0$			-1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB} = -4.0V$ $I_C = 0$			-0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -10V$ $I_C = -10mA$	80		300	
	$h_{FE(2)}$	$V_{CE} = -10V$ $I_C = -1.0mA$	70			
	$h_{FE(3)}$	$V_{CE} = -10V$ $I_C = -100mA$	40			
Collector to Emitter Saturation Voltage	$V_{CE(sat) (1)}$	$I_C = -10mA$ $I_B = -1.0mA$			-0.2	V
	$V_{CE(sat) (2)}$	$I_C = -50mA$ $I_B = -5.0mA$			-0.3	V
Emitter to Base Saturation Voltage	$V_{BE(sat)}$	$I_C = -10mA$ $I_B = -1.0mA$			-0.75	V
Transition Frequency	f_T	$V_{CE} = -5.0V$ $I_C = -10mA$ $f = 30MHz$	50			MHz

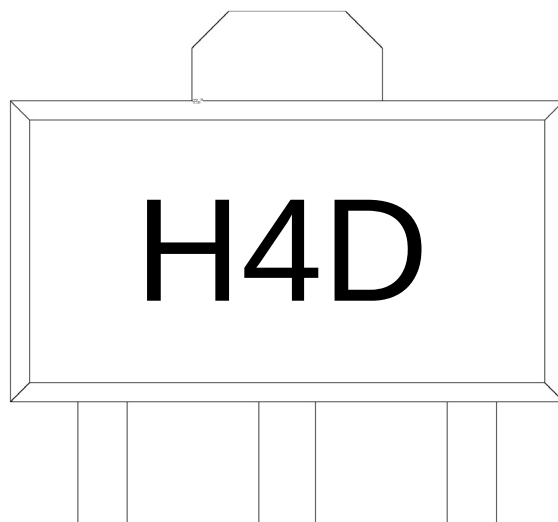
Electrical Characteristic Curve



Ø □ =) ⌀ / Package Dimensions



, M y f / Marking Instructions



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4D y ° Z W A

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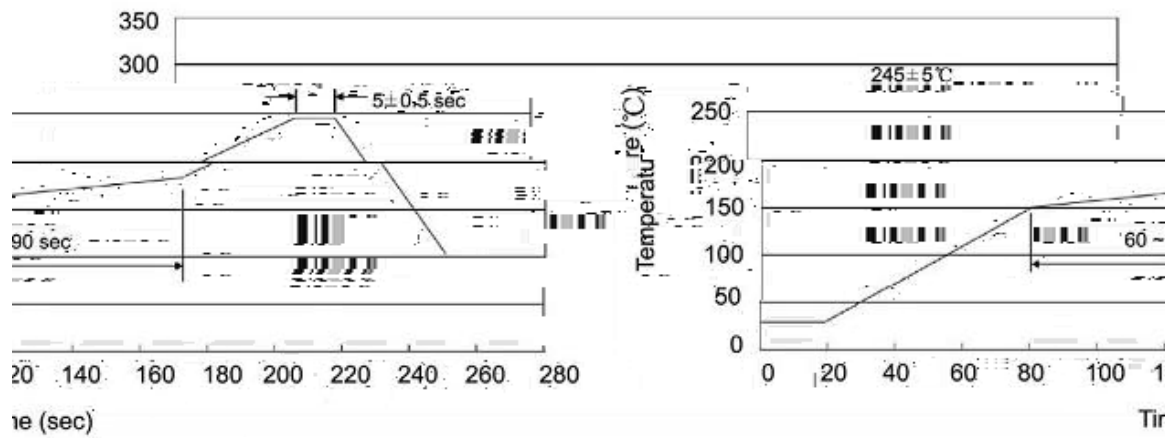
Note:

H: Company Code.

4D: Product Type.

** : Lot No. Code, code change with Lot No.

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^ačy

- 1o• Ä ½ “† 150 ½180 - k ž • 60 ½90sec;
- 2o• Q > “† 245 r5 - k ž • 4 Ò 5 r0.5sec;
- 3o•D N ò i Ò 0 , † 2 ½10 - /sec.

Note:

- 1.Preheating:150~180 - , Time:60~90sec.
- 2.Peak Temp.:245 r5 - , Duration:5 r0.5sec.
3. Cooling Speed: 2~10 - /sec.

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