/ Descriptions

WR0459 Ṃ Ṃ Ꝉ QSQ Æ Ṁ ч s ‖ ㄱ Silicon NPN transistor in a TO-126 Plastic Package.

/ Features

ᆩ ı ă S_F@418 Z ε Ta@58 ɬ ζ

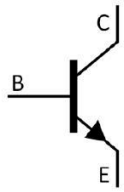
High Power Dissipation :P_C=1.5W(Ta=25).

/ Applications

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Low collector saturation voltage ,large current.

/ Equivalent Circuit



/ Pinning



PIN1 χ Emitter PIN 2 χ Collector PIN 3 χ Base

/ h_{FE} Classifications & Marking

ð м ㄱ ب ˝ See Marking Instructions.

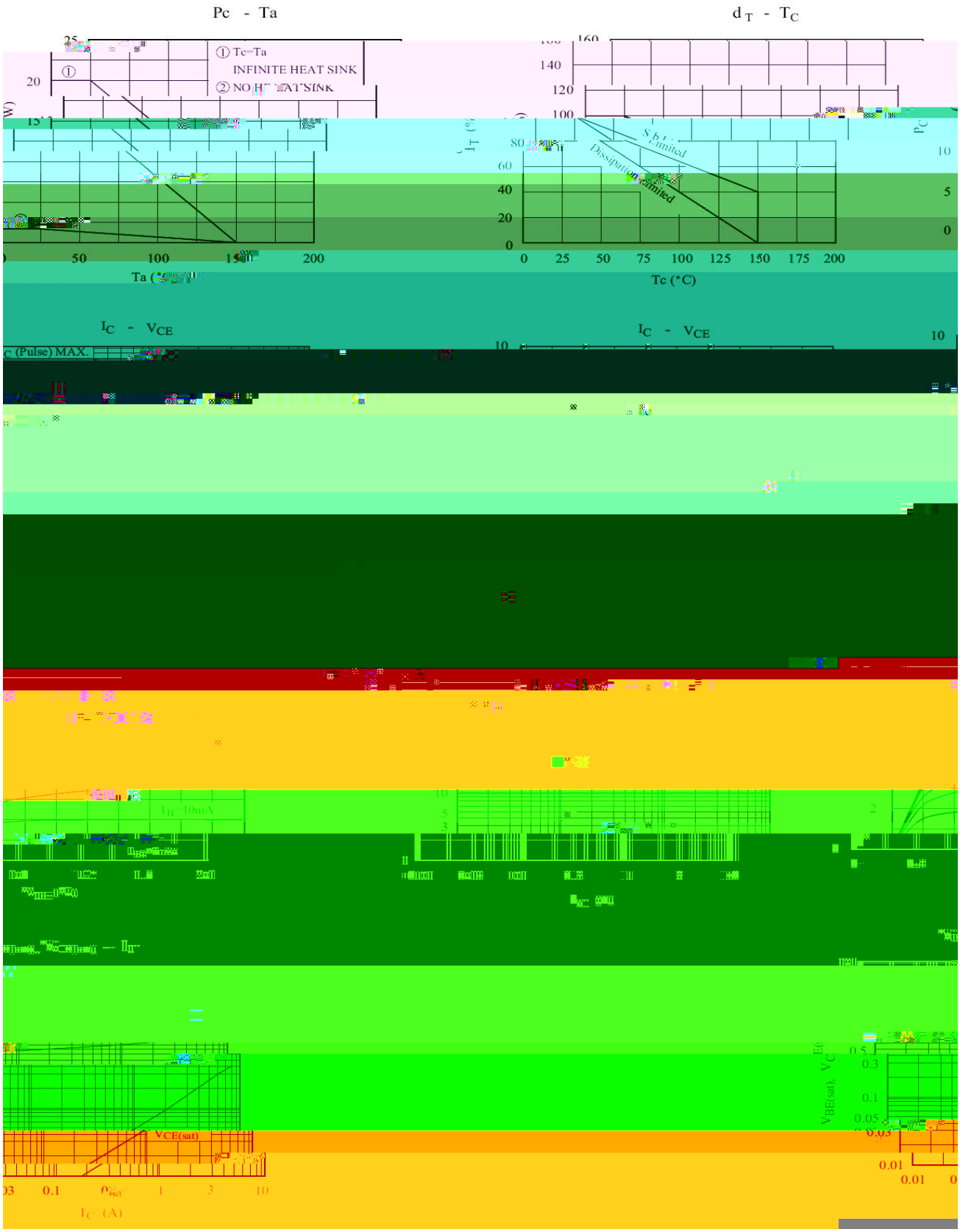
/ Absolute Maximum Ratings(Ta=25)

v ̈Ω Parameter	ϒ N Symbol	̈Ω Ö Rating	D Ч Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	7.0	V
Collector Current - Continuous	I_C	5.0	A
Peak Collector Current	I_{CP}	8.0	A
Base Current - Continuous	I_B	1.0	A
Collector Power Dissipation	P_C	1.5	W
Collector Power Dissipation	P_C(Tc=25)	20	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

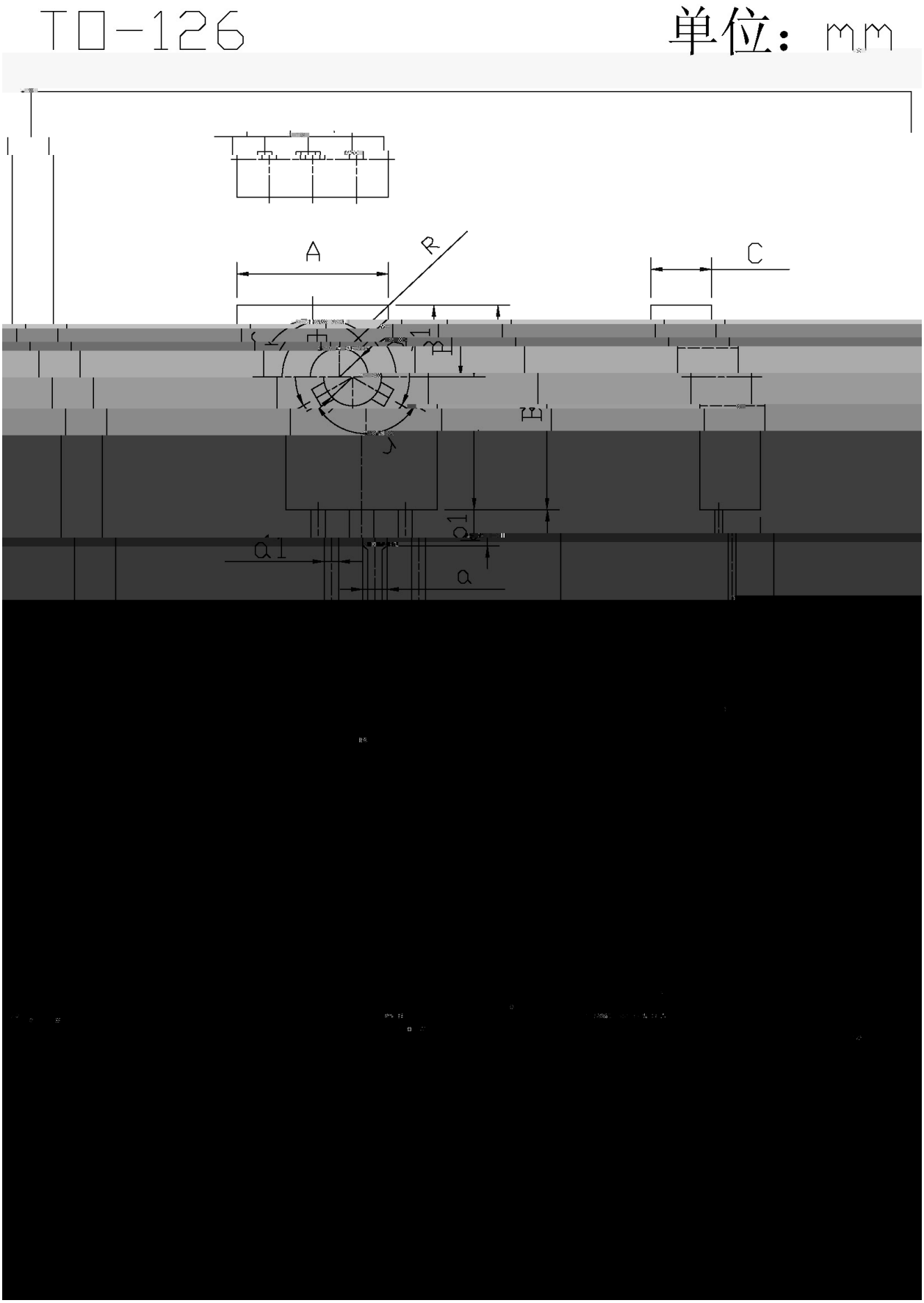
/ Electrical Characteristics(Ta=25)

v ̈Ω Parameter	ϒ N Symbol	Ш :ϯ Ţ Test Conditions	ω ṇ Ö Min	Ε ʒ Ö Typ	ω ᶻ Ö Max	D Ч Unit
Collector Cut-off Current	I_{CBO}	V_{CB}=50V I_E=0			10	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=7V I_C=0			10	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=1.0V I_C=2.0A	100		400	
	$h_{FE(2)}$	V_{CE}=1.0V I_C=0.1A	60			
	$h_{FE(3)}$	V_{CE}=2.0V I_C=5.0A	50			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2.0A I_B=0.2A		0.1	0.3	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=2.0A I_B=0.2A		0.9	1.2	V
Turn On Time	t_{on}	V_{CC}=10V I_B=0.2A		0.2	1	μs
Fall Time	t_f			1.1	2.5	μs
Storage Time	t_S			0.2	1	μs

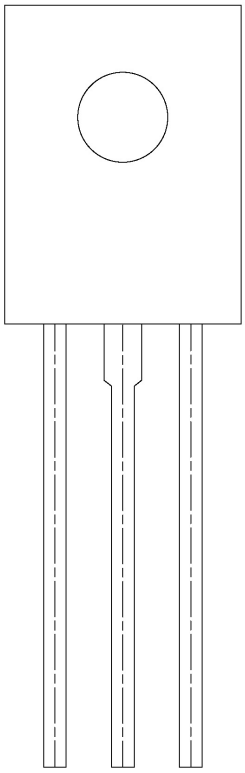
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



ِ ّ χ

EU χ

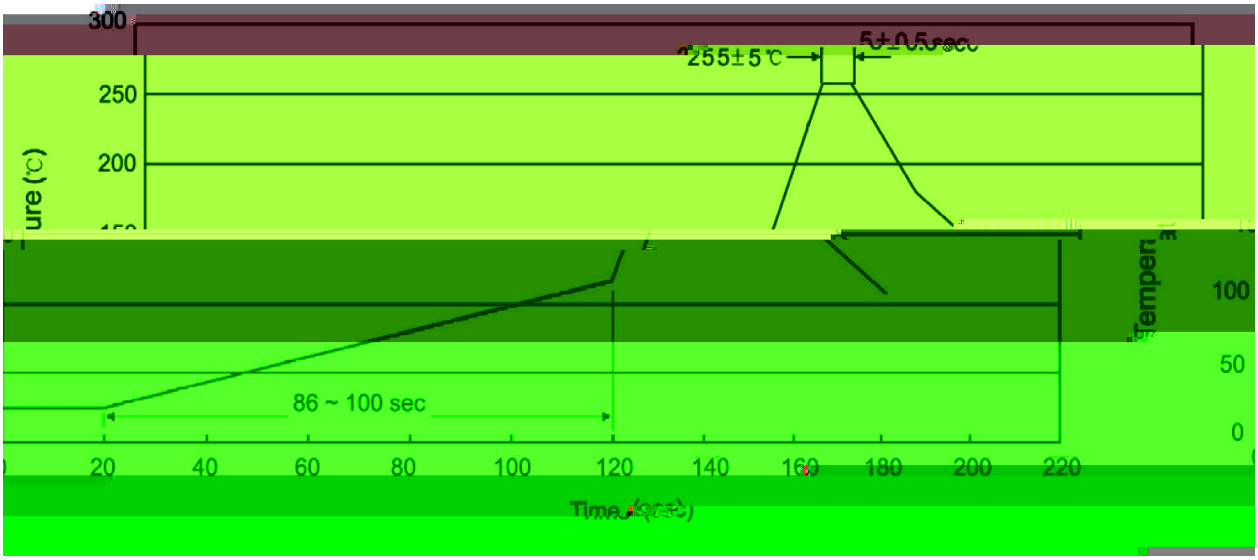
G49<4 χ

---- χ

Note:

BR:

( ) / Temperature Profile for Dip Soldering(Pb-Free)



ب ˝ χ

1 Ĺ ♬ □ ỷ 25 Ḱ 150 ł ı `H ڑ 60 Ḱ 90sec;

2 Š Ө □ ỷ 255 ° 5 ł ı `H ڑ `Y ﾊ ㎞ 5 ° 0.5sec;

3 ì ˙ ｲ ˛ ↄ ﻉ ỷ ㎞ 2 Ḱ 10 ł /sec.

Note:

1.Preheating:25~150 ł , Time:60~90sec.

2.Peak Temp.:255 ° 5 ł , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ł /sec.

/ Resistance to Soldering Heat Test Conditions

□ ỷ χ 270 ° 5 ł `H ڑ χ 10 ° 1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

ˈQ ţ ｙ Ł / BULK

Package Type	Units					Dimension		(unit mm³)

˛ ｱ ｙ Ł / TUBE

Package Type	Units					Dimension		(unit mm³)

/ Notices