DTA143EKA

Rev.H Jun.-2025

蓝箭电子 BLUE ROCKET ELECTRONICS

DATA SHEET

/ Descriptions

VRW056 ṂṂ Ꝁ SQS ʺỌÈ s Ⅱ ᒣ Silicon PNP Digital transistor in a SOT-23 Plastic Package.

/ Features

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With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process,HF Product.

/ Applications

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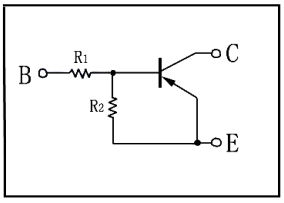
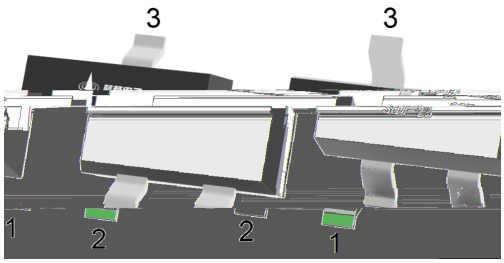
Switching, inverter circuit, interface circuit and driver circuit applications.

/ Equivalent Circuit



/ Pinning



PIN 1 χ Base PIN 2 χ Emitter PIN 3 χ Collector

/ h_{FE} Classifications & Marking

Marking	H13

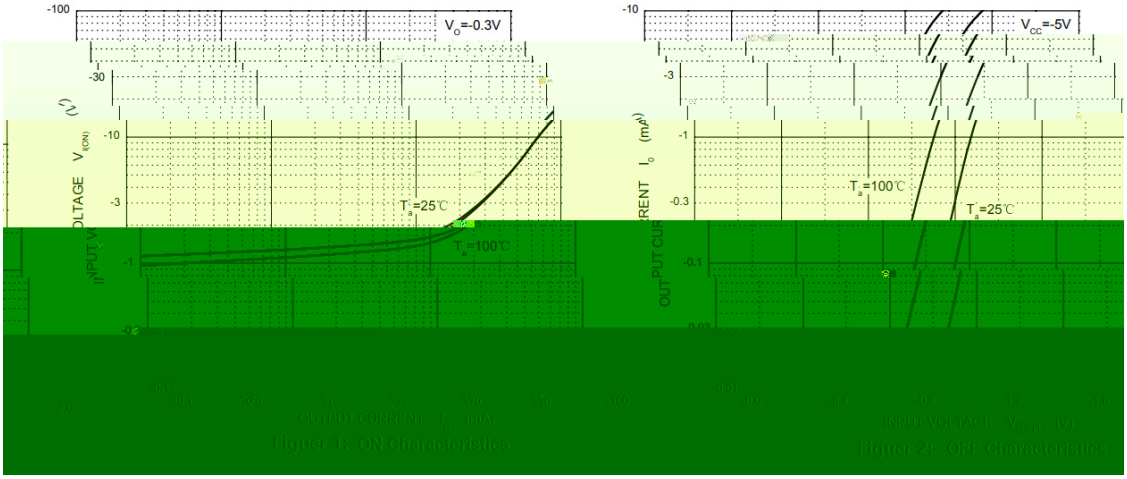
/ Absolute Maximum Ratings(Ta=25)

v ̈Ω Parameter	ϒ N Symbol	̈Ω Ö Rating	D Ꮋ Unit
Output Voltage	V_{CC}	-50	V
Input Voltage	V_{IN}	10	V
		-30	V
Output Current	I_O	-100	mA
Power Dissipation	P_d	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55～150	

/ Electrical Characteristics(Ta=25)

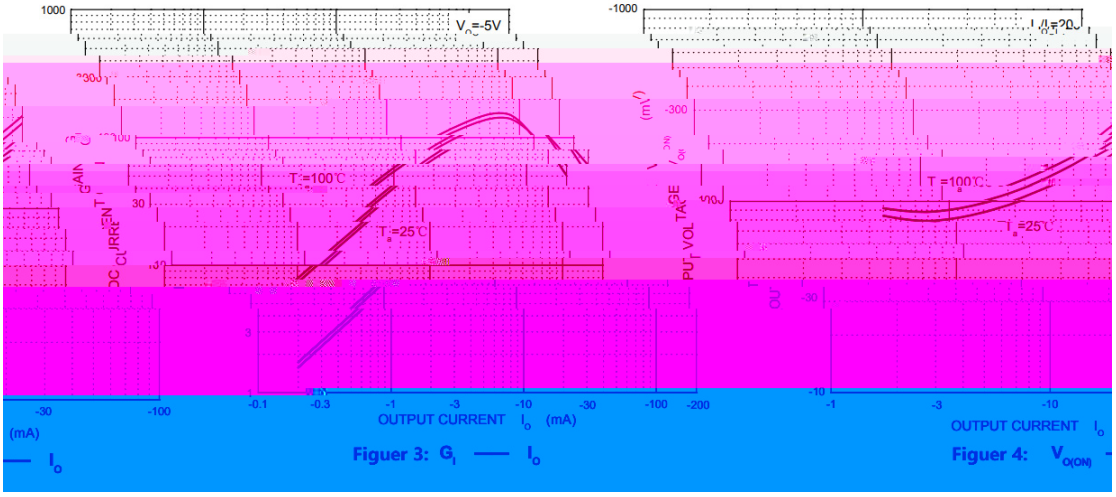
v ̈Ω Parameter	ϒ N Symbol	ᴌᴌ ː ᛏ ᛉ Test Conditions	ώ ṇ Ö Min	Ɛ ʒ Ö Typ	ώ ᶻ Ö Max	D Ꮋ Unit
Input Voltage	$V_{I(off)}$	v_{CC}=-5.0V I_O=-100μA	-0.5		-	V
	$V_{I(on)}$	V_O=-0.3V I_O=-20mA			-3	V
Output Voltage	$V_{O(on)}$	I_O=-10mA I_I=-0.5mA		-0.1	-0.3	V
Input Current	I_I	V_I=-5.0V			-1.8	mA
Output Cut-off Current	$I_{O(off)}$	V_{CC}=-50V V_I=0V			-0.5	μA
DC Current Gain	G_I	V_O=-5.0V I_O=-10mA	30			
Transition Frequency	f_T	V_{CE}=-10V I_E=5.0mA f=100MHz		250		MHz
Resistance1	R_1		3.29	4.7	6.11	KΩ
Resistance Ratio	R_2/R_1		0.8	1.0	1.2	

/ Electrical Characteristic Curve



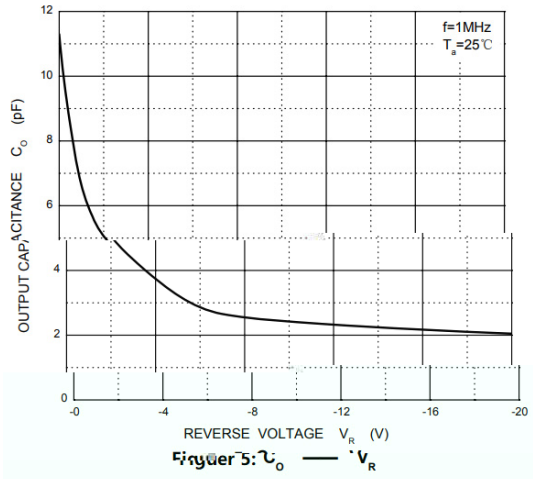
Figuer 1: ON Characteristics

Figuer 2: OFF Characteristics

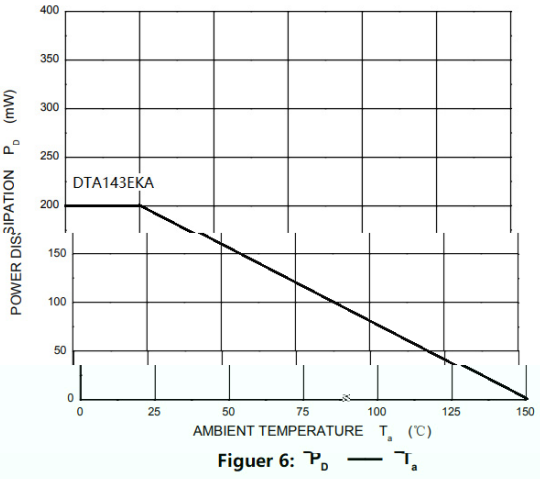


Figuer 3: G_I —— I_O

Figuer 4: $V_{O(ON)}$ -



Figuer 5: C_O —— V_R

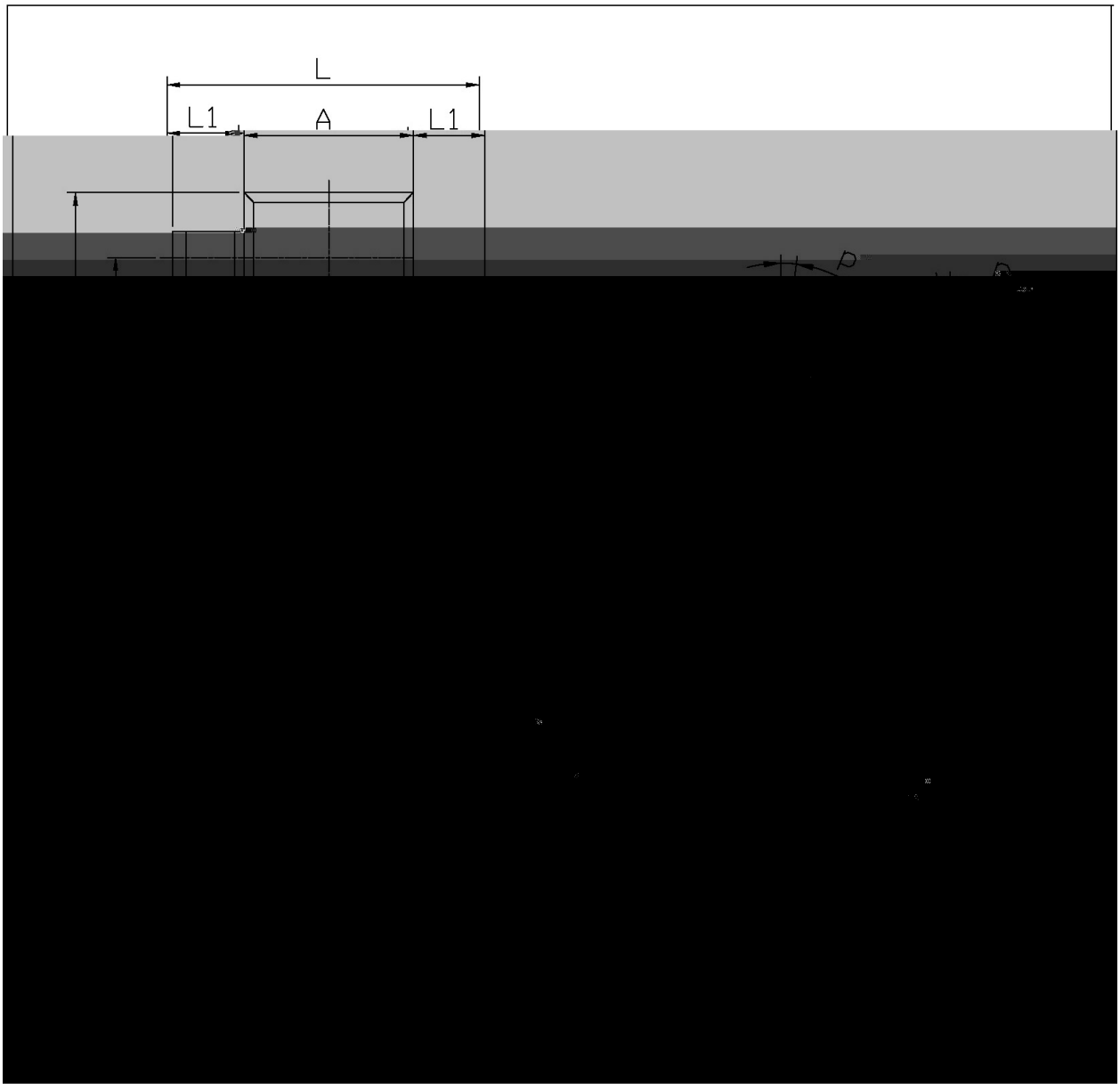


Figuer 6: P_D —— T_a

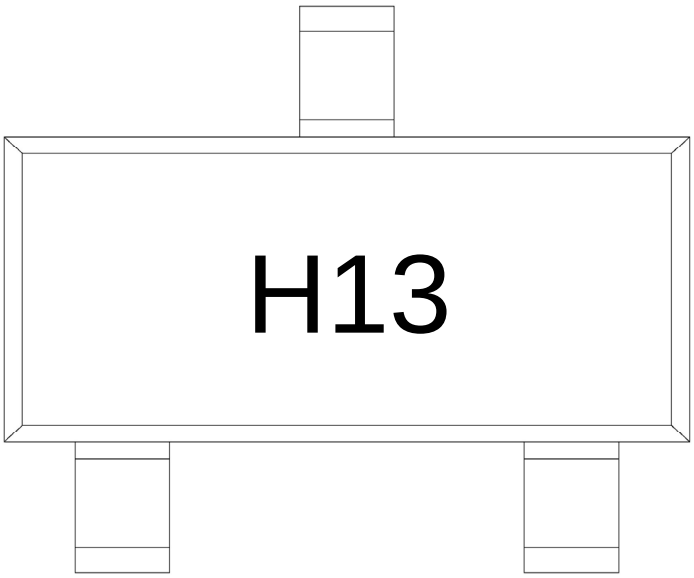
/ Package Dimensions

SOT-23

单位：mm



/ Marking Instructions



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13 χ ﻩﺭ ﺯ ﻦ ﻕ

Note:

K χ Company Code

13 χ Product Type Code

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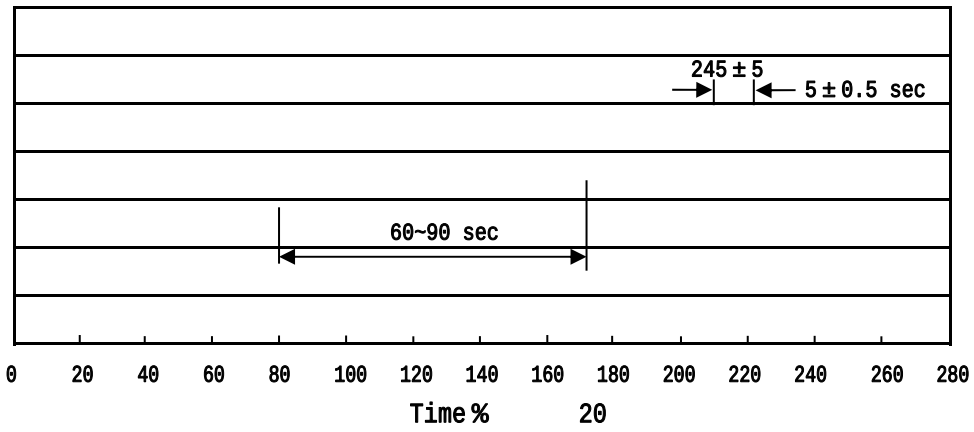

ب ˝ χ

1 Ĺ ♬ □ ỷ 150 Ḱ 180 ł ı `H ڑ 60 Ḱ 90sec;

2 Š Ë □ ỷ 245 ° 5 ł ı `H ڑ `Y ﾊ ㎞ 5 ° 0.5sec;

3 ì ˙ ﾘ ¸ ↄ ﷺ ỷ ㎞ 2 Ḱ 10 ł /sec.

Note:

1.Preheating:150~180 ł , Time:60~90sec.

2.Peak Temp.:245 ° 5 ł , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ł /sec.

/ Resistance to Soldering Heat Test Conditions

□ ỷ χ 260 ° 5 ł `H ڑ χ 10 ° 1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

ↄ ` ﾔ Ł / REEL

Package Type	Units					Dimension		(unit mm³)
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices