MMBR5179

Rev.F Apr.-2017

蓝箭电子 BLUE ROCKET ELECTRONICS

DATA SHEET

/ Descriptions

VRW056 QSQ Silicon NPN transistor in a SOT-23 Plastic Package.

/ Features

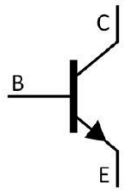
/ H,

High $f_{T,}$ small NF.

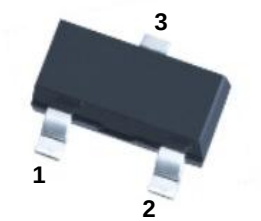
/ Applications

High frequency amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN 1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Range	30 ˙ 250
Marking	H7H

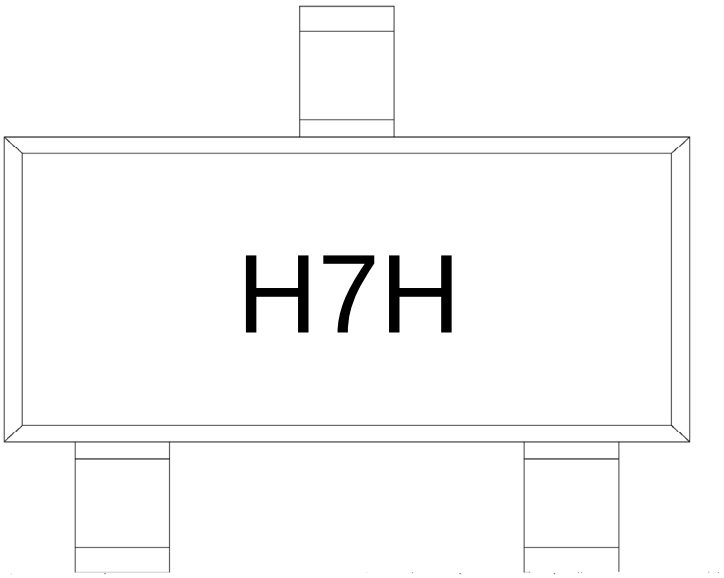
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	15	V
Emitter to Base Voltage	V_{EBO}	3.0	V
Collector Current	I_C	50	mA
Collector Power Dissipation	P_C	375	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=3.0mA I_B=0	15			V
Collector to Base Breakdown Voltage	V_{CBO}	I_C=1.0 A I_E=0	30			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=10 A I_C=0	3.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=15V I_E=0			0.02	A
DC Current Gain	h_{FE}	V_{CE}=1.0V I_C=3.0mA	30		250	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=10mA I_B=1.0mA			0.4	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=10mA I_B=1.0mA			1.0	V
Transition Frequency	f_T	V_{CE}=6.0V I_C=5.0mA f=100MHz		1400		MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V I_E=0 f=0.1~1.0MHz			1.0	pF
Noise Figure	NF	I_C=1.5mA V_{CE}=6.0V R_S=50		4.5		dB
Common–Emitter Amplifier Power Gain	Gpe	V_{CE}=6.0V I_C=5.0mA f=200MHz		15		dB

/ Marking Instructions

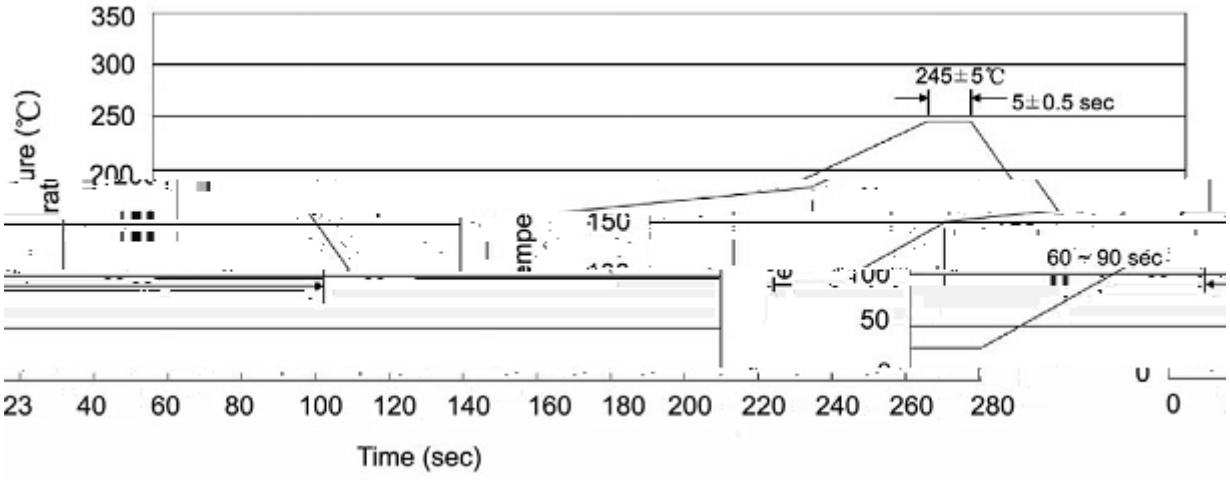


H	И
7H	N

Note:

H	Company Code
7H	Product Type

( ) / 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					Dimension		(unit mm^3)
	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 ρ ×8	180×120×180	390×385×205

/ Notices