KTC3880

Rev.F Apr.-2017

BLUE ROCKET ELECTRONICS

DATA SHEET

/ Descriptions

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

/ Features

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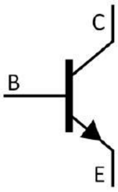
Small reverse transfer capacitance, low noise figure.

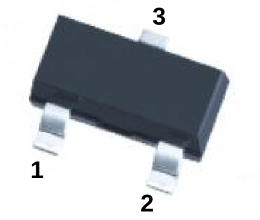
/ Applications

High frequency low noise amplifier.

/ Equivalent Circuit



/ Pinning



PIN 1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	R	O	Y
h_{FE} Range	40 80	70 140	100 200
Marking	HAQR	HAQO	HAQY

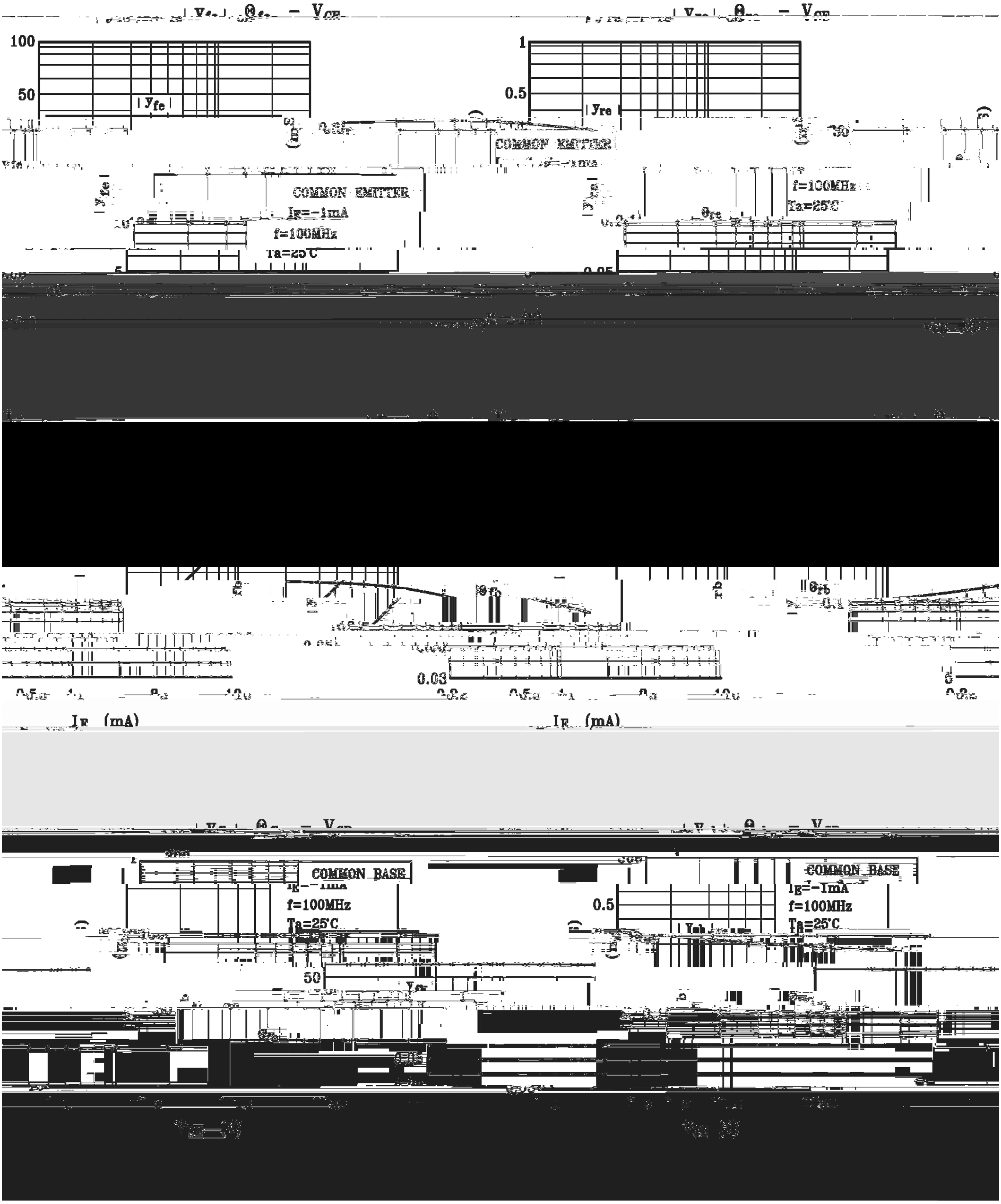
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	4.0	V
Collector Current	I_C	20	mA
Emitter Current	I_E	-20	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

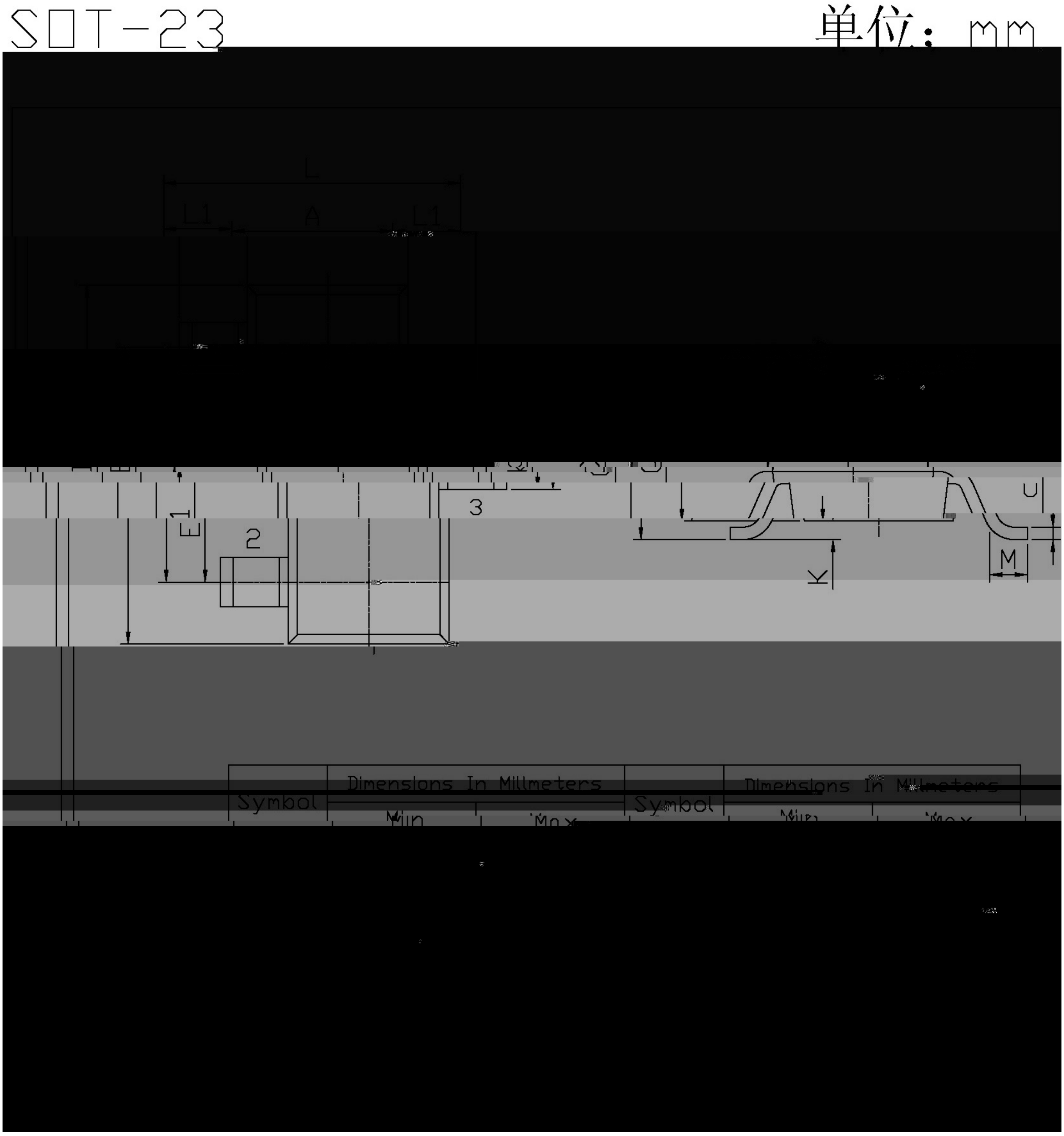
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	V_{CB}=18V I_E=0			0.5	A
Emitter Cut-Off Current	I_{EBO}	V_{EB}=4.0V I_C=0			0.5	A
DC Current Gain	h_{FE}	V_{CE}=6.0V I_C=1.0mA	40		200	
Reverce Transfer Capacitance	C_{re}	V_{CE}=6.0V f=1.0MHz		0.7		pF
Transition Frequency	f_T	V_{CE}=6.0V I_C=1.0mA		550		MHz
Collector- Base Time Constant	Cc.rbb	V_{CE}=6.0V I_E=1.0mA f=30MHz			30	pS
Noise Figure	NF	V_{CE}=6.0V I_C=0.1mA f=100MHz		2.5	5.0	dB
Power Gain	G_{pe}	V_{CE}=6.0V I_C=0.1mA f=100MHz	15	18		dB

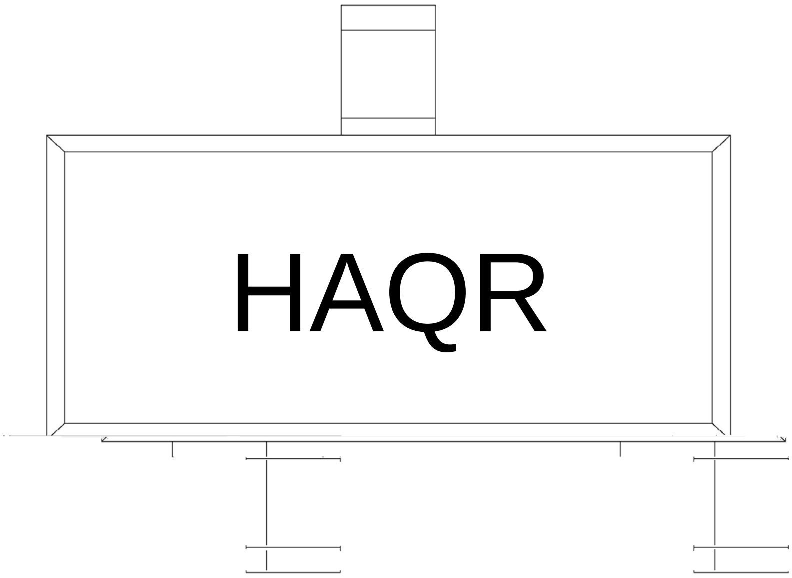
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



H

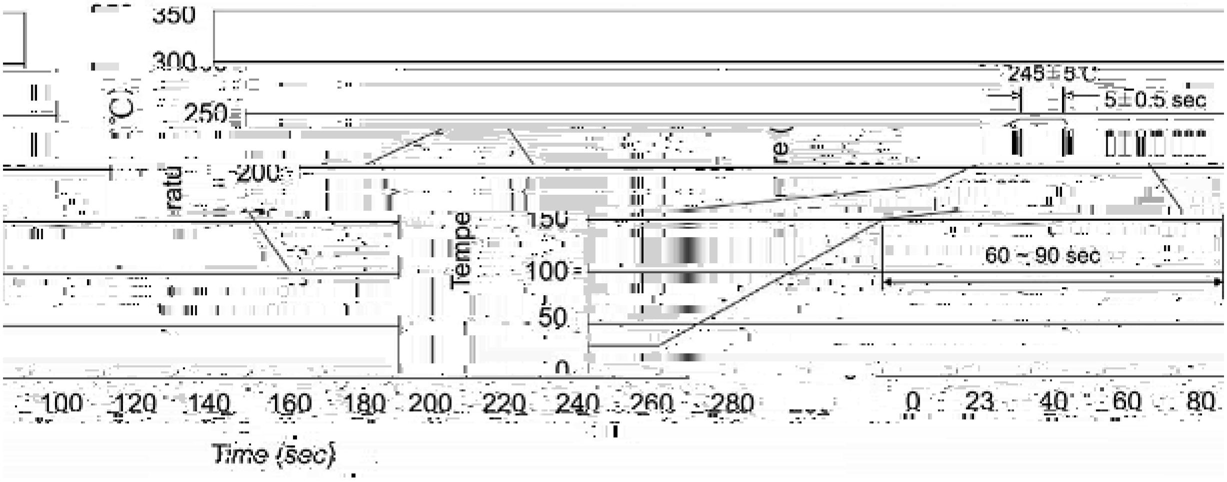
AQ

R h_{FE}

Note:

H	Company Code
AQ	Product Type
R	h_{FE} Classifications Symbol

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



1 25 150 60 90sec;
2 245±5 5±0.5sec;
3 2 10 /sec.

Note:
1.Preheating:25~150 , Time:60~90sec.
2.Peak Temp.:245±5 , Duration:5±0.5sec.
3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5