

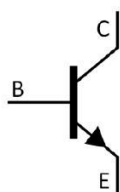
VRW056

QSQ

Silicon NPN transistor in a SOT-23 Plastic Package.

Good linearity of f_T .

High frequency, VHF band amplifier application.



PIN 1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Range	20~200
Marking	HHH

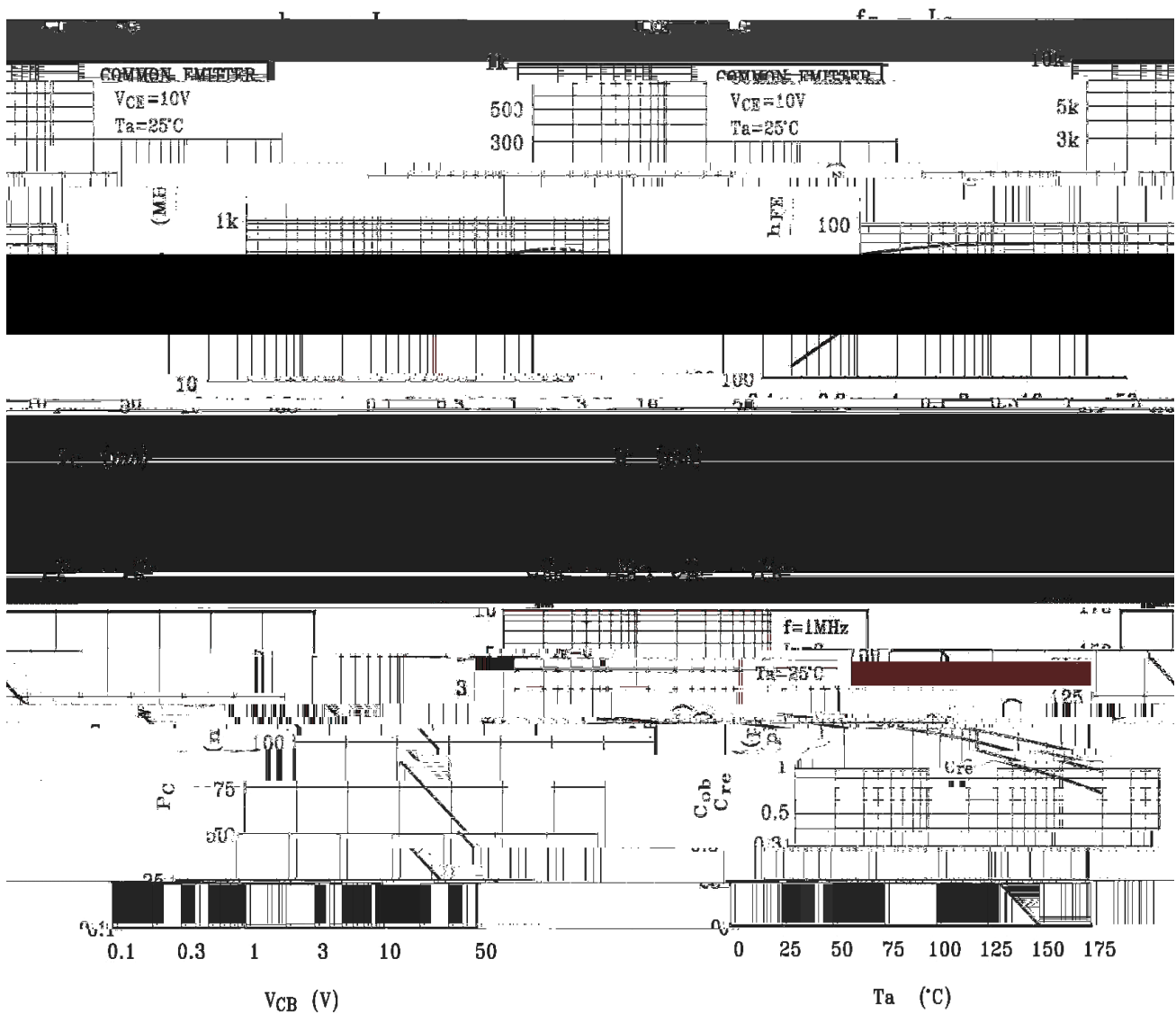
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	4.0	V
Collector Current	I_C	50	mA
Base Current	I_B	25	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 to Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$	25			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$ $I_E=0$			0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=3.0V$ $I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=10V$ $I_C=10mA$	20	70	200	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=15mA$ $I_B=1.5mA$			0.2	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=15mA$ $I_B=1.5mA$			1.5	V
Transition Frequency	f_T	$V_{CE}=10V$ $I_C=10mA$	250	600		MHz
Output Capacitance	C_C	$V_{CB}=10V$ $f=1.0MHz$ $I_E=0$		1.1	1.6	pF
Collector- Base Time Constant	$C_{c.rbb}$	$V_{CB}=10V$ $f=30MHz$ $I_E=1.0mA$			25	pS

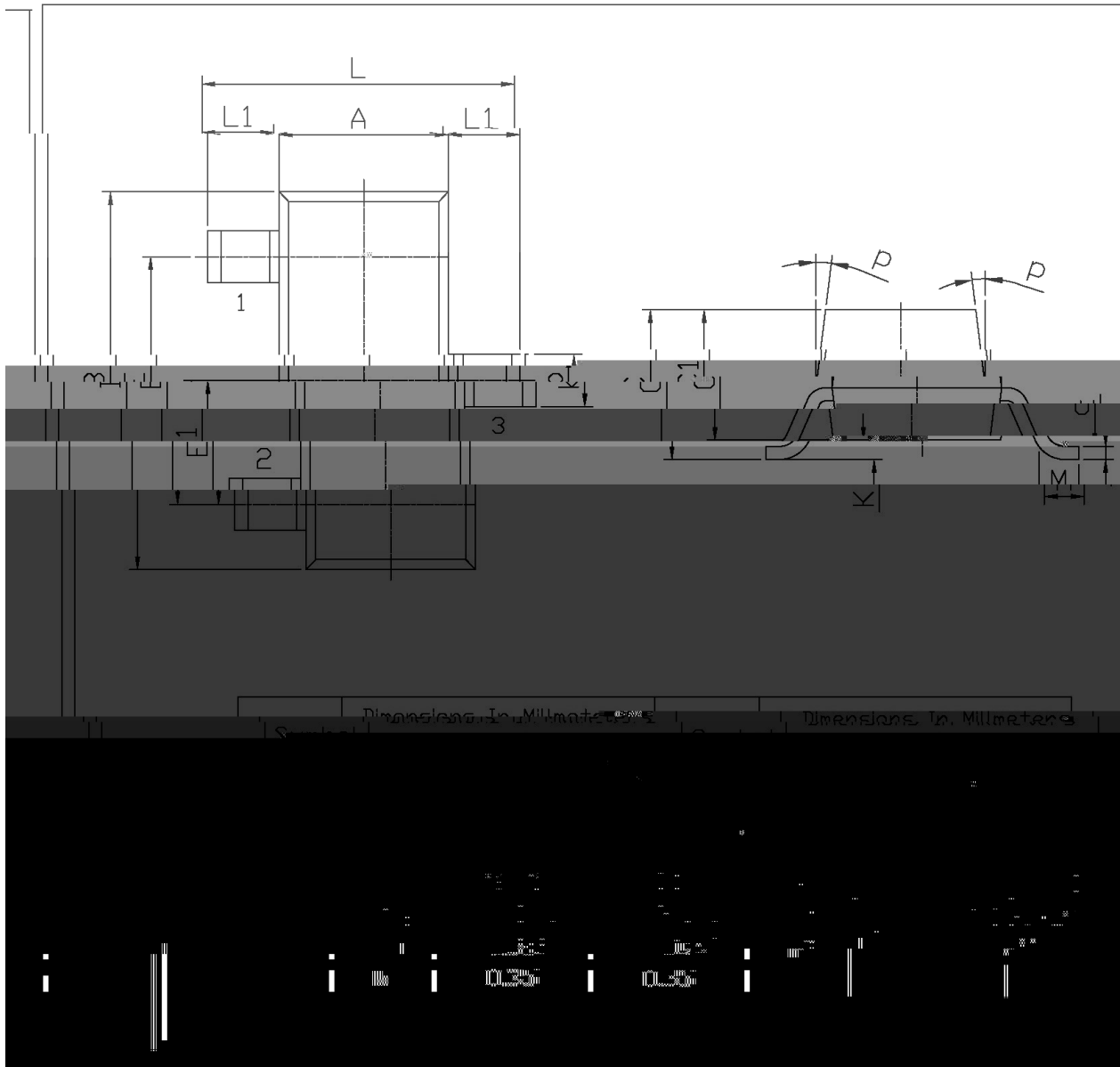
/ Electrical Characteristic Curve



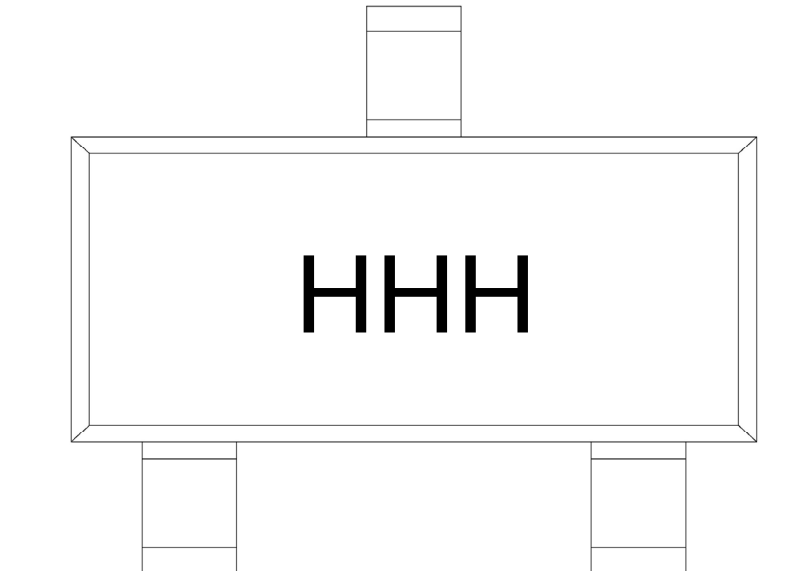
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



K

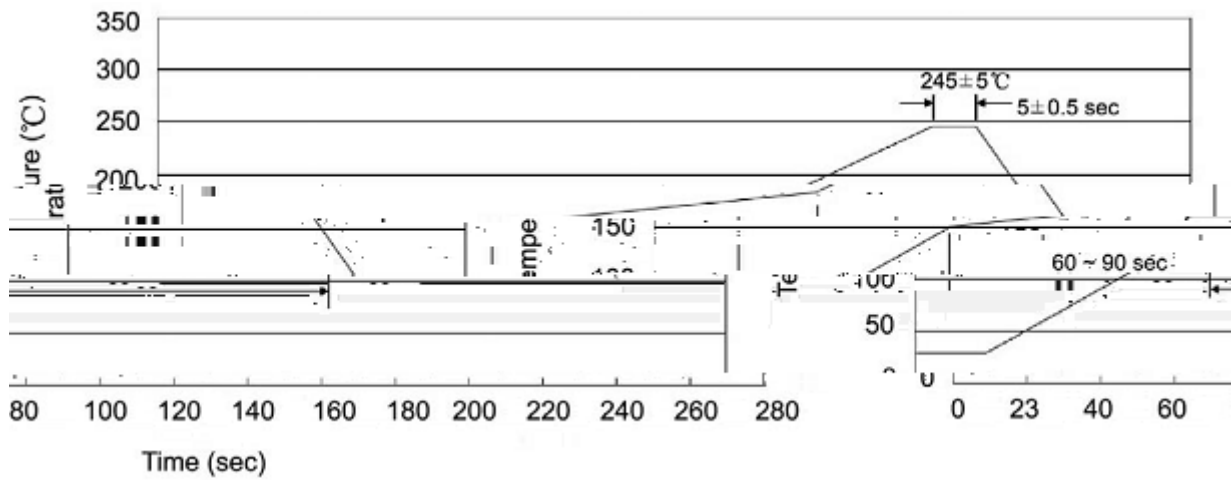
HH

Note:

K Company Code

HH 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
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/ Packaging SPEC.

/ REEL

Package Type	Units
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