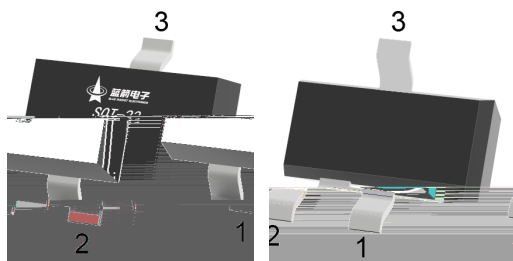
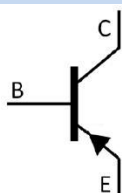


VRW056 SQS Silicon PNP transistor in a SOT-23 Plastic Package.

933 pD DHF0T434

Collector currents to 600mA. Kalogen free product, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

General purpose amplifier, Meet the stringent requirements of automotive applications.



PIN 1 Base

PIN 2 Emitter

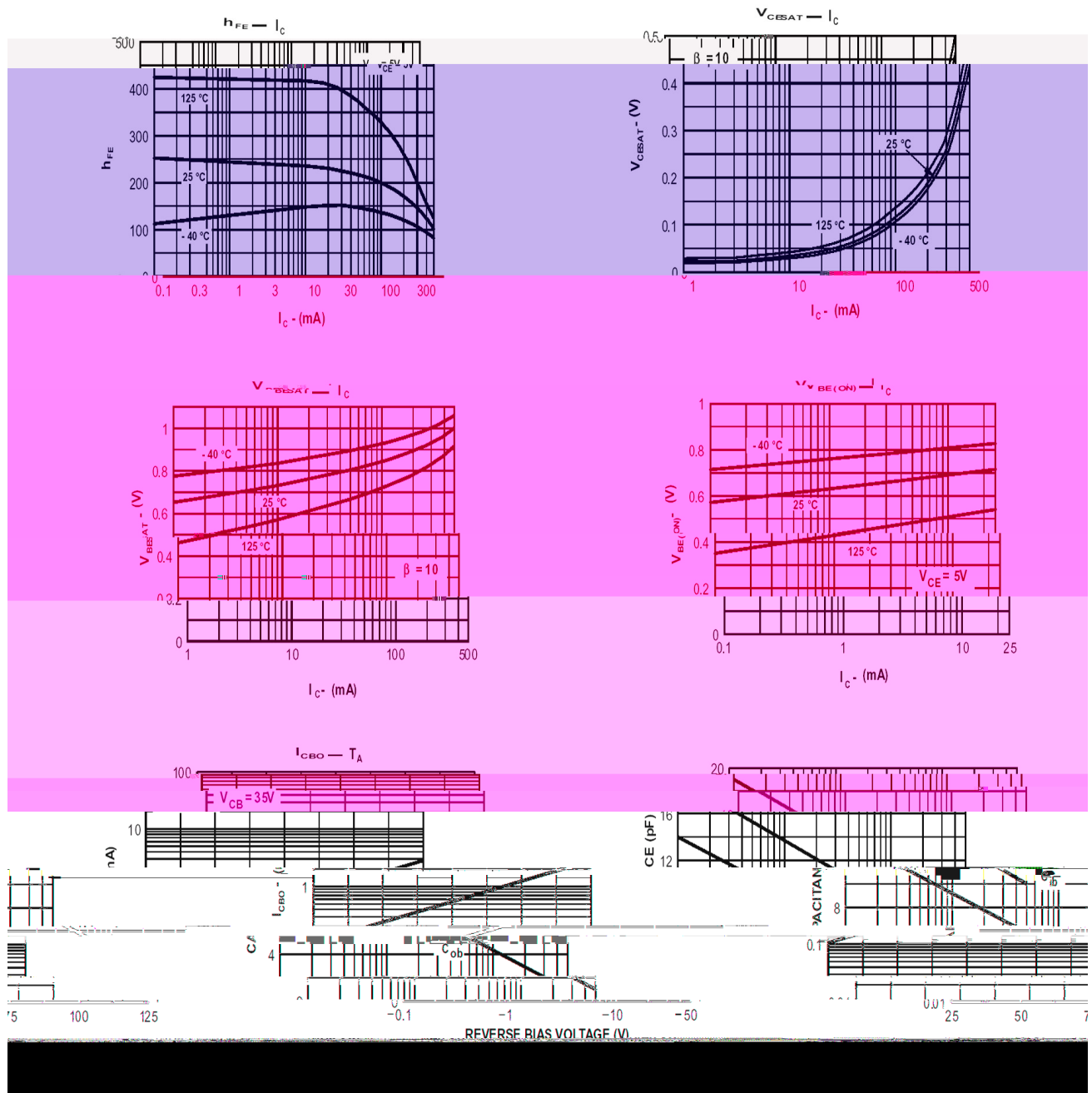
PIN 3 Collector

h _{FE} Range	100 300
Marking	Q2F

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-60	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current	I_C	-600	mA
Collector Power Dissipation	P_C	350	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

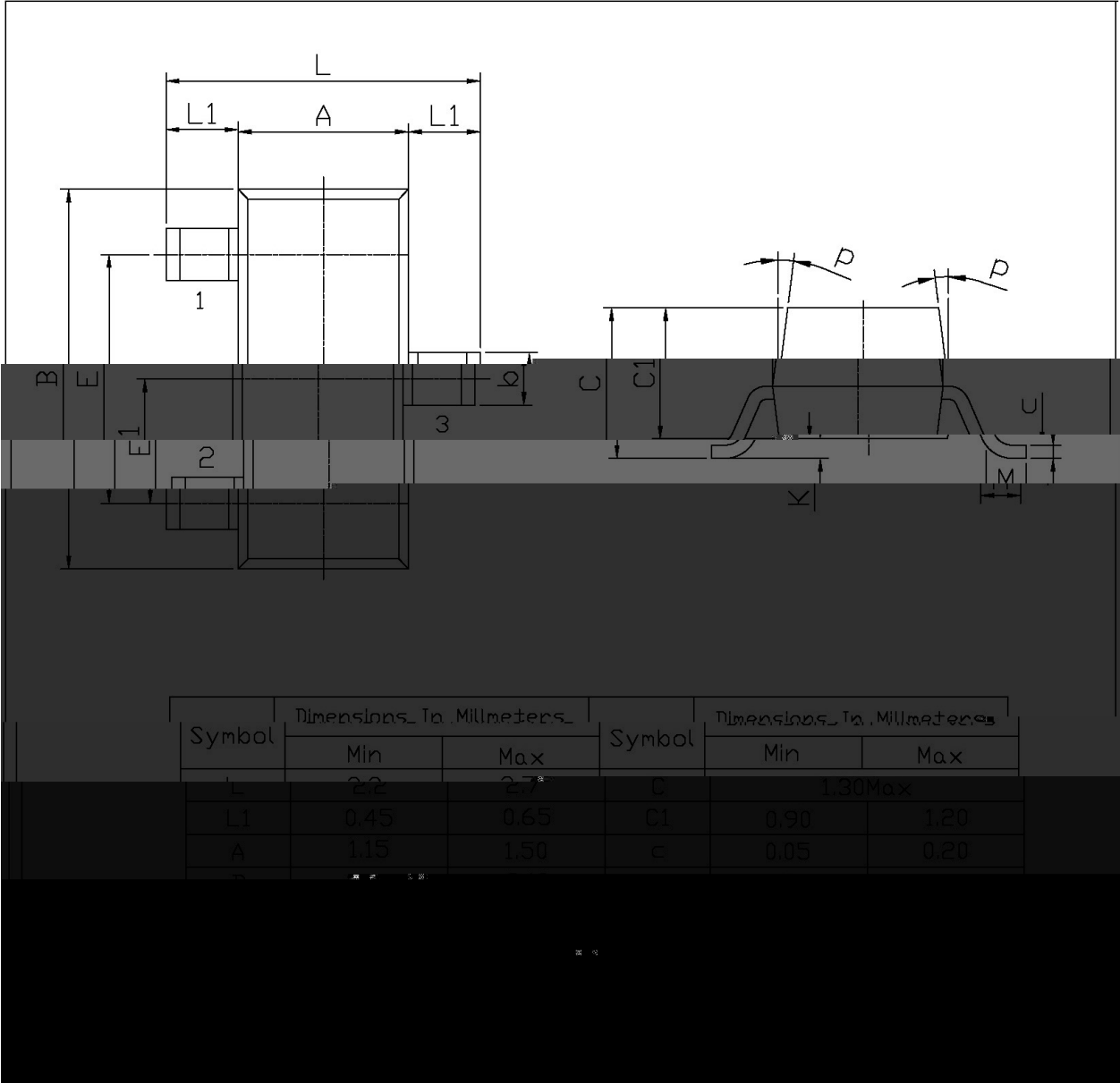
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C = -10\mu A$ $I_E = 0$	-60			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C = -10mA$ $I_B = 0$	-60			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E = -10\mu A$ $I_C = 0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -50V$ $I_E = 0$			-0.01	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -10V$ $I_C = -150mA^*$	100		300	
	$h_{FE(2)}$	$V_{CE} = -10V$ $I_C = -500mA^*$	50			
	$h_{FE(3)}$	$V_{CE} = -10V$ $I_C = -10mA$	100			
	$h_{FE(4)}$	$V_{CE} = -10V$ $I_C = -1.0mA$	100			
	$h_{FE(5)}$	$V_{CE} = -10V$ $I_C = -0.1mA$	75			
Collector-Emitter Saturation Voltage	$V_{CE(sat) (1)}$	$I_C = -150mA$ $I_B = -15 mA$			-0.4	V
	$V_{CE(sat) (2)}$	$I_C = -500mA$ $I_B = -50mA$			-1.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat) (1)}$	$I_C = -150mA$ $I_B = -15 mA$			-1.3	V
	$V_{BE(sat) (2)}$	$I_C = -500mA$ $I_B = -50mA$			-2.6	V
Transition Frequency	f_T	$V_{CE} = -20V$ $I_C = -50mA$ $f = 100MHz$	200			MHz
Output Capacitance	C_{ob}	$V_{CB} = -10V$ $I_E = 0$ $f = 1.0MHz$			8.0	pF
Turn-On Time	t_{on}	$V_{CC} = -30V$ $I_C = -150mA$ $I_{B1} = -15mA$			50	ns
Turn-Off Time	t_{off}	$V_{CC} = -30V$ $I_C = -150mA$ $I_{B1} = I_{B2} = -15mA$			100	ns

*Pulse Test: Pulse Width ■ 300 μs , Duty Cycle ■ 2.0%



SOT-23

单位：mm





T

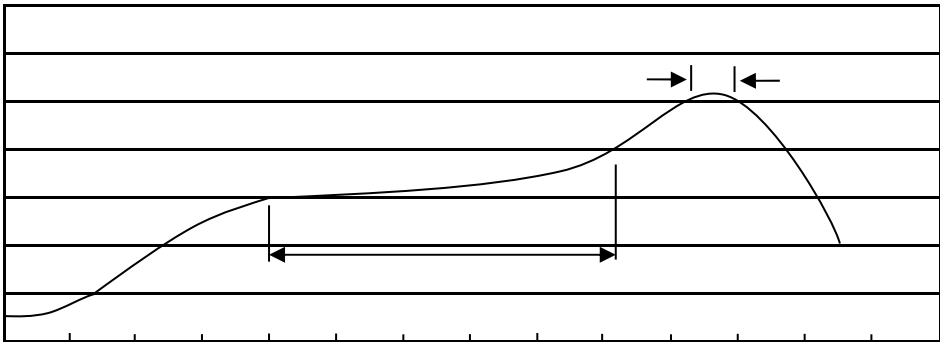
2F

Note:

Q: Automobile halogen-free product Code

2F Product Type Code

Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 200%

60 120sec;

1.Preheating:150~200%, Time:60~120sec.
- 2

255 ± 5%

5 ± 0.5sec;

2.Peak Temp.:255 ± 5%, Duration:5 ± 0.5sec.
- 3

2 10%/sec.

3.Cooling Speed: 2~10%/sec.

260 ± 5%

10 ± 1 sec.

Temp.:260±5℃

Time:10±1 sec

/ REEL

Package Type	Units					Dimension (unit mm ³)		
SOT-23	3,000	10	30,000	6	180000	7 ×8	180×120×180	390×385×205