

Rev.A Mar.-2023

SOT-23

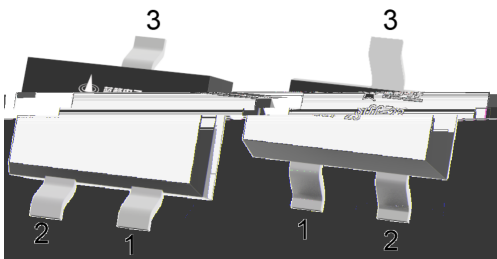
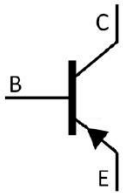
PNP

Silicon PNP transistor in a SOT-23 Plastic Package.

AEC-Q101

Low  $V_{CE(sat)}$ , high current, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

General purpose switching and muting, LCD back-lighting, supply line switching circuits, Meet the stringent requirements of automotive applications.



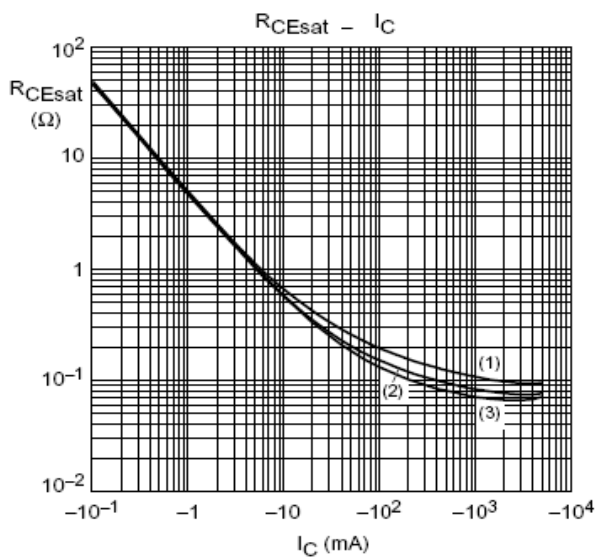
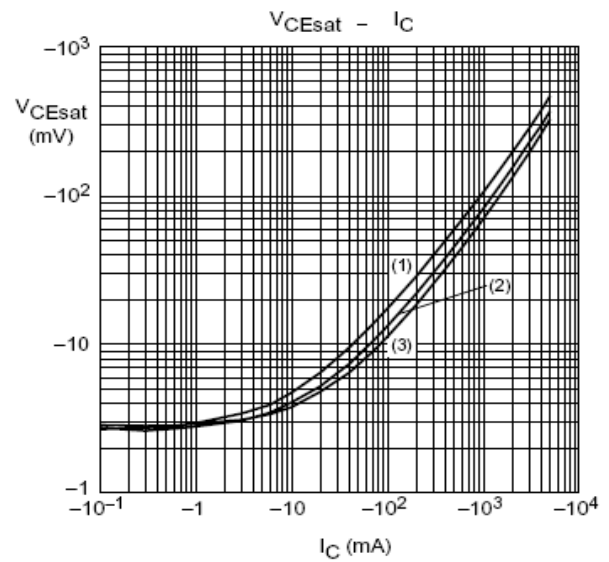
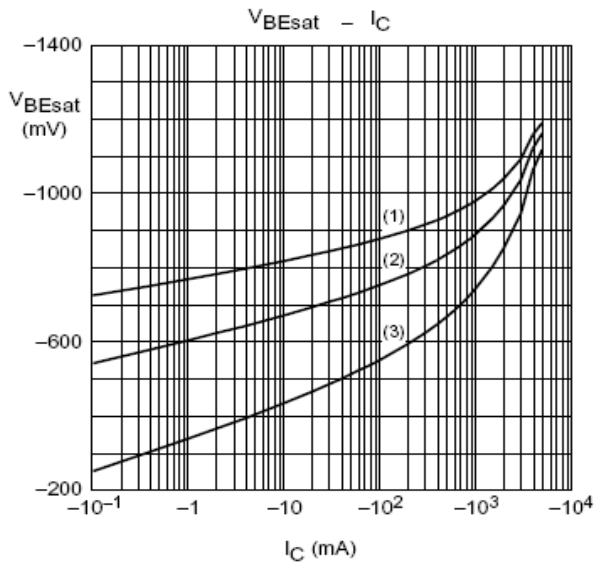
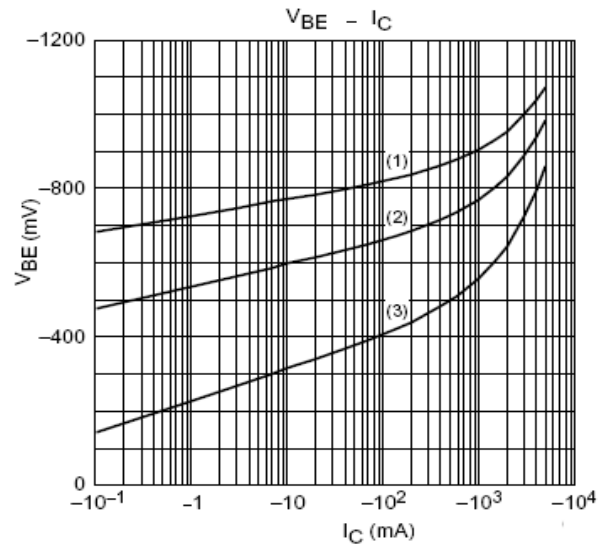
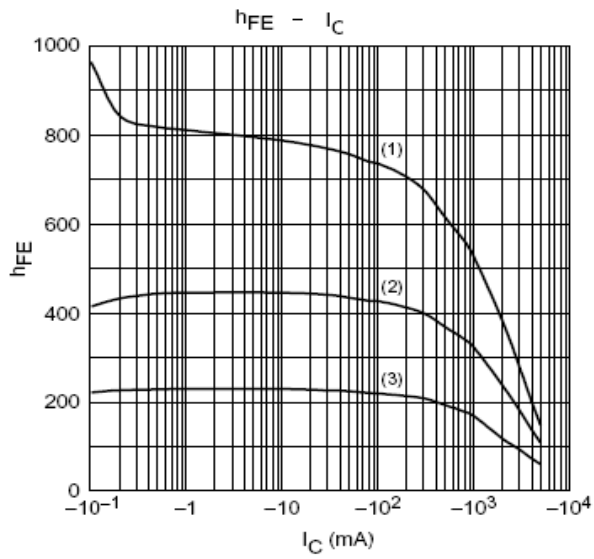
PIN 1 Base    PIN 2 Emitter    PIN 3 Collector

$h_{FE}$ Range	220~450
Marking	QZH

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-20	V
Collector to Emitter Voltage	$V_{CEO}$	-20	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current	$I_C$	-2.0	A
Peak Collector Current	$I_{CM}$	-5.0	A
Base Current	$I_B$	-0.5	A
total power dissipation	$P_{tot(1)}^2$	300	mW
total power dissipation	$P_{tot(2)}^{1\ 2}$	1.2	W
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

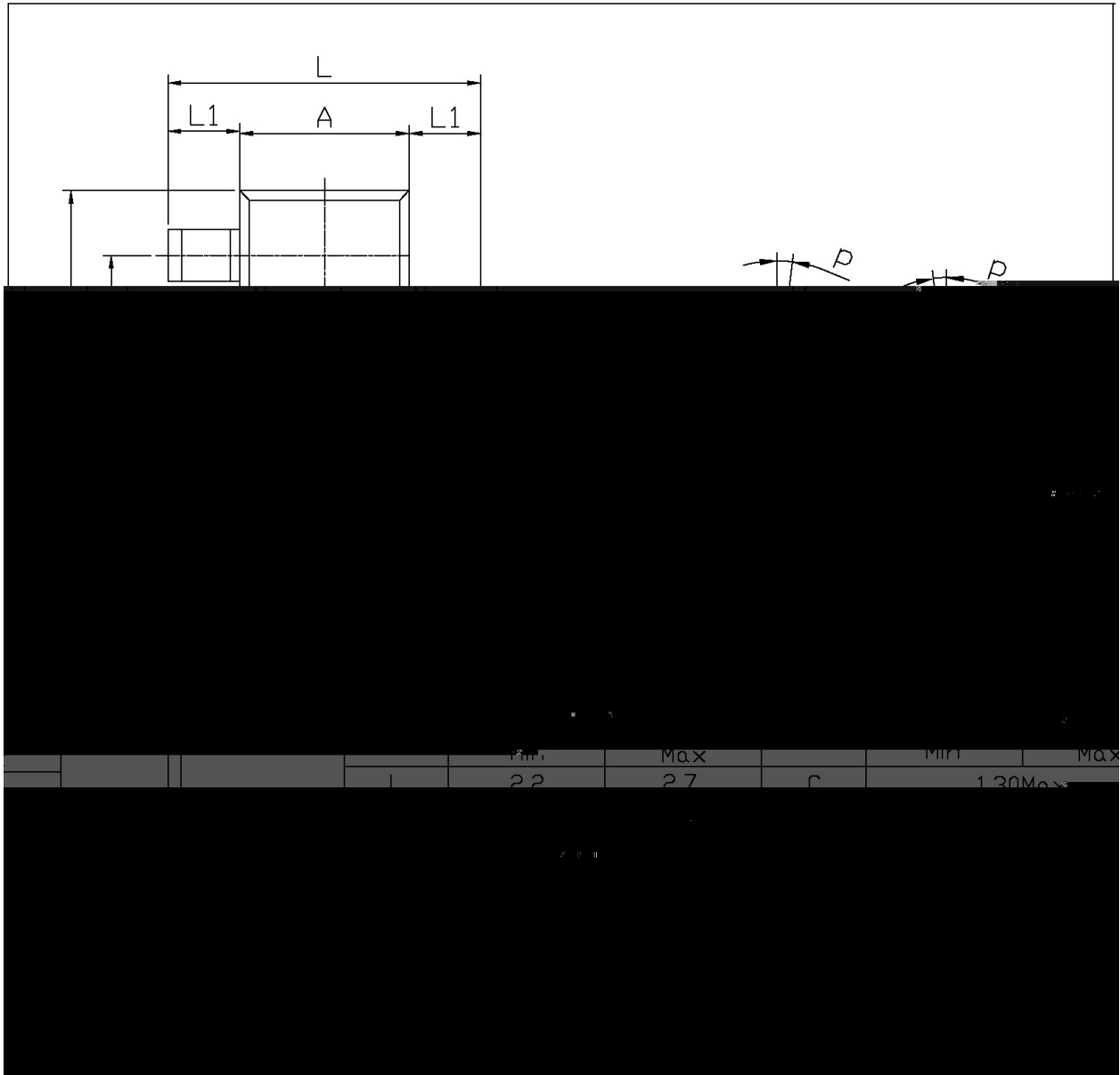
1  $tp \leq 100\ ms$   $\delta \leq 0.25$   
 2

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-20V$ $I_E=0$			-0.1	$\mu A$
		$V_{CB}=-20V$ $I_E=0$ $T_j=150$			-50	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-5.0V$ $I_C=0$			-0.1	$\mu A$
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-2.0V$ $I_C=-500mA$	220		450	
	$h_{FE(2)}$	$V_{CE}=-2.0V$ $I_C=-100mA$	220			
	$h_{FE(3)}$	$V_{CE}=-2.0V$ $I_C=-1.0A$	200			
	$h_{FE(4)}$	$V_{CE}=-2.0V$ $I_C=-2.0A$	150			
	$h_{FE(5)}$	$V_{CE}=-2.0V$ $I_C=-3.0A$	100			
Collector-Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=-500mA$ $I_B=-50mA$			-100	mV
	$V_{CE(sat)(2)}$	$I_C=-2.0A$ $I_B=-100mA$			-300	mV
Equivalent on-resistance	$R_{CE(sat)}$	$I_C=-2.0A$ $I_B=-200mA$		125	150	m $\Omega$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-2.0A$ $I_B=-100mA$			-1.1	V
		$I_C=-3.0A$ $I_B=-300mA$			-1.2	V
Base-Emitter Voltage	$V_{BE(ON)}$	$V_{CE}=-2.0V$ $I_C=-1.0A$			-1.2	V
Transition Frequency	$f_T$	$V_{CE}=-5.0V$ $I_C=-100mA$				

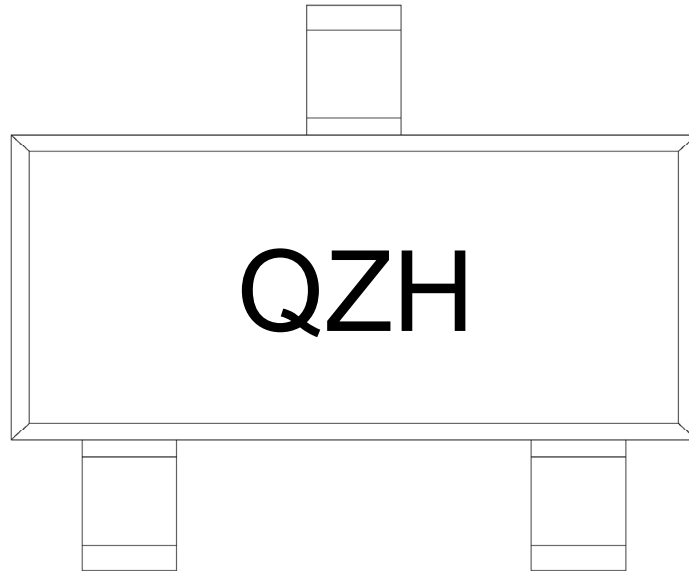


SOT-23

单位: mm



	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	



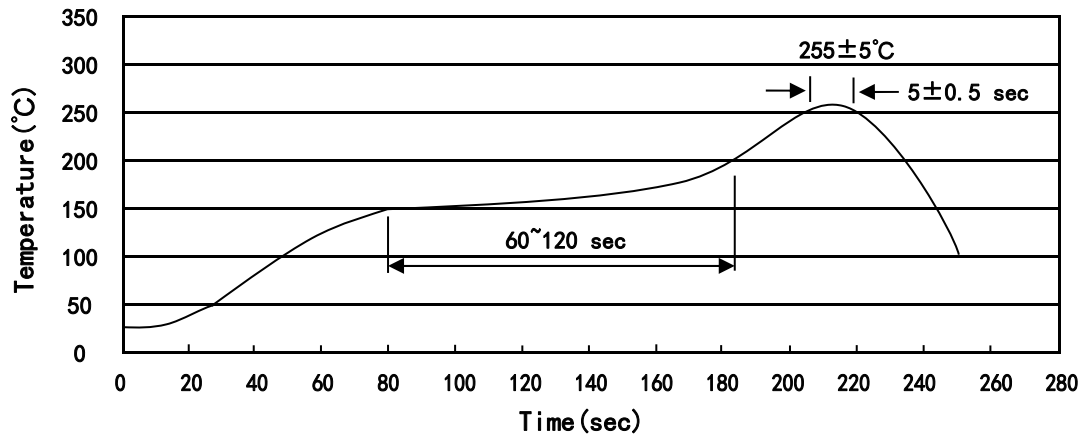
Q

ZH

Note:

Q: Automobile halogen-free product Code

ZH Product Type

**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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT-23	3,000	10	30,000	6	180,000	7 x8	180x120x180	390x385x205