

/ Descriptions

Silicon PNP transistor in a SOT-23 Plastic Package.

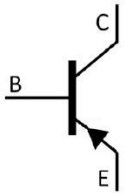
/ Features

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

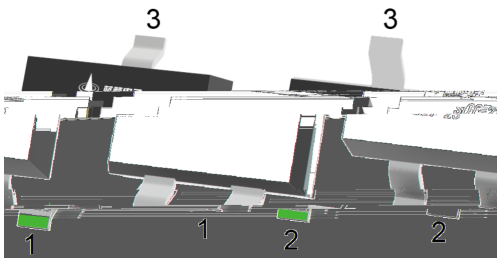
/ Applications

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

/ Equivalent Circuit



/ Pinning



PIN 1 Base

PIN 2 Emitter

PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Range	>200
Marking	ZDQ

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V _{CBO}	-50	V
Collector to Emitter Voltage	V _{CEO}	-50	V
Emitter to Base Voltage	V _{EBO}	-5	V
Collector Current	I _C	-2	A
Peak Collector Current	I _{CM}	-5	A
Base Current	I _B	-0.5	A
Total Power Dissipation	P _{tot}	300	mW
Total Power Dissipation	P _{tot}	1.2	W
Junction Temperature	T _j	150	
Storage Temperature Range	T _{stg}	-65 150	

$$t_p \leq 100 \text{ ms}$$

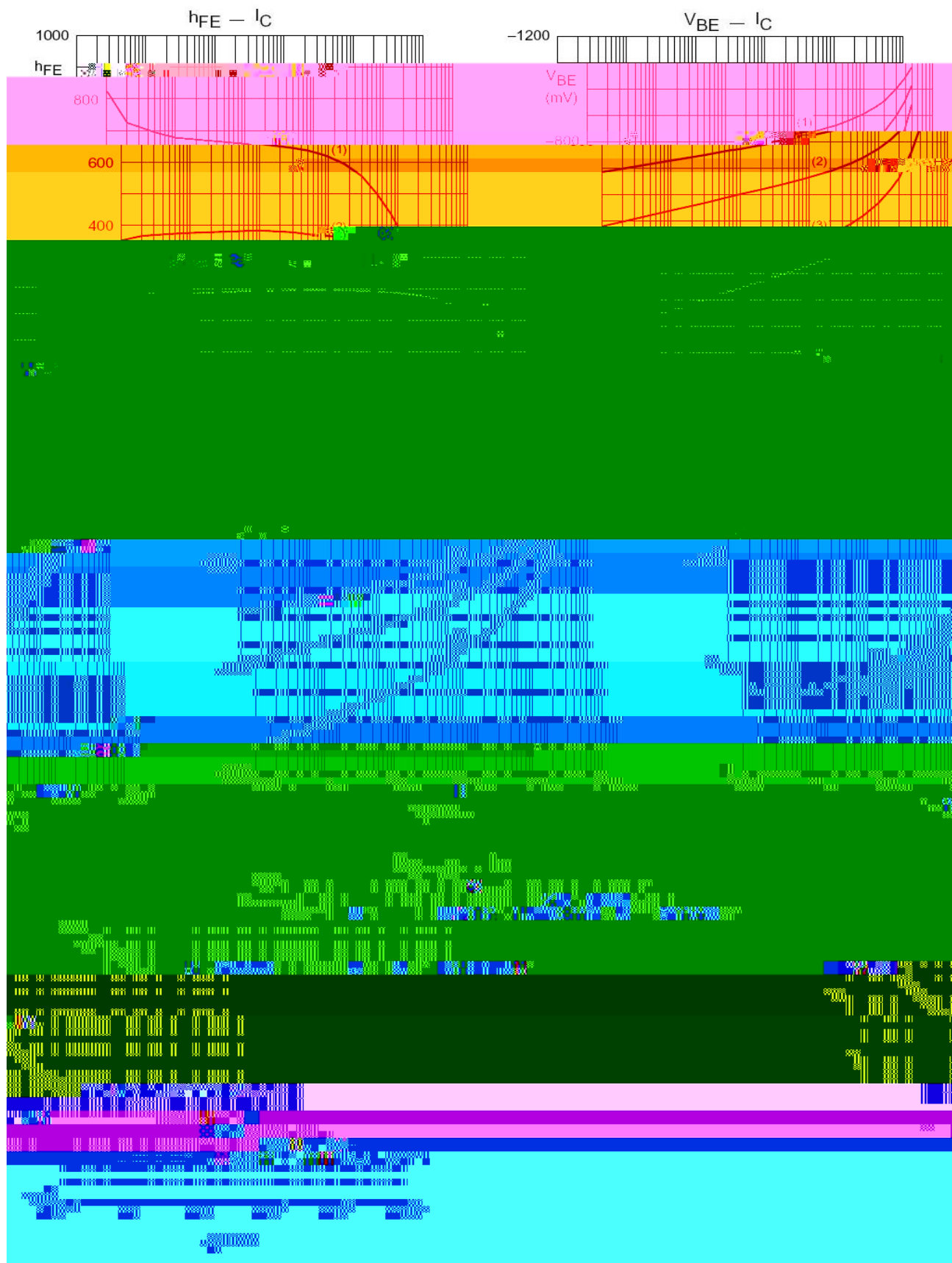
$$\delta \leq 0.25$$

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I _{CBO}	V _{CB} =-50V I _E =0			-100	nA
		V _{CB} =-50V I _E =0 T _j =150			-50	μA
emitter Cut-Off Current	I _{EBO}	V _{EB} =-5.0V I _C =0			-100	nA
DC Current Gain	h _{FE(1)}	V _{CE} =-2.0V I _C =-100mA	200			
	h _{FE(2)}	V _{CE} =-2.0V I _C =-500mA	200			
	h _{FE(3)*}	V _{CE} =-2.0V I _C =-1.0A	200			
	h _{FE(4)*}	V _{CE} =-2.0V I _C =-2.0A	130			
	h _{FE(5)*}	V _{CE} =-2.0V I _C =-3.0A	80			
Collector-Emitter Saturation Voltage	V _{CE(sat)(1)*}	I _C =-500mA I _B =-50mA			-80	mV
	V _{CE(sat)(2)*}	I _C =-2.0A I _B =-100mA			-320	mV
Equivalent On-Resistance	R _{CE(sat)*}	I _C =-2.0A I _B =-200mA		90	135	mΩ
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 f=100MHz	100			MHz
Collector Capacitance	C _C	V _{CB} =-10V I _E =0 f=1.0MHz			35	pF

$$\delta \leq$$

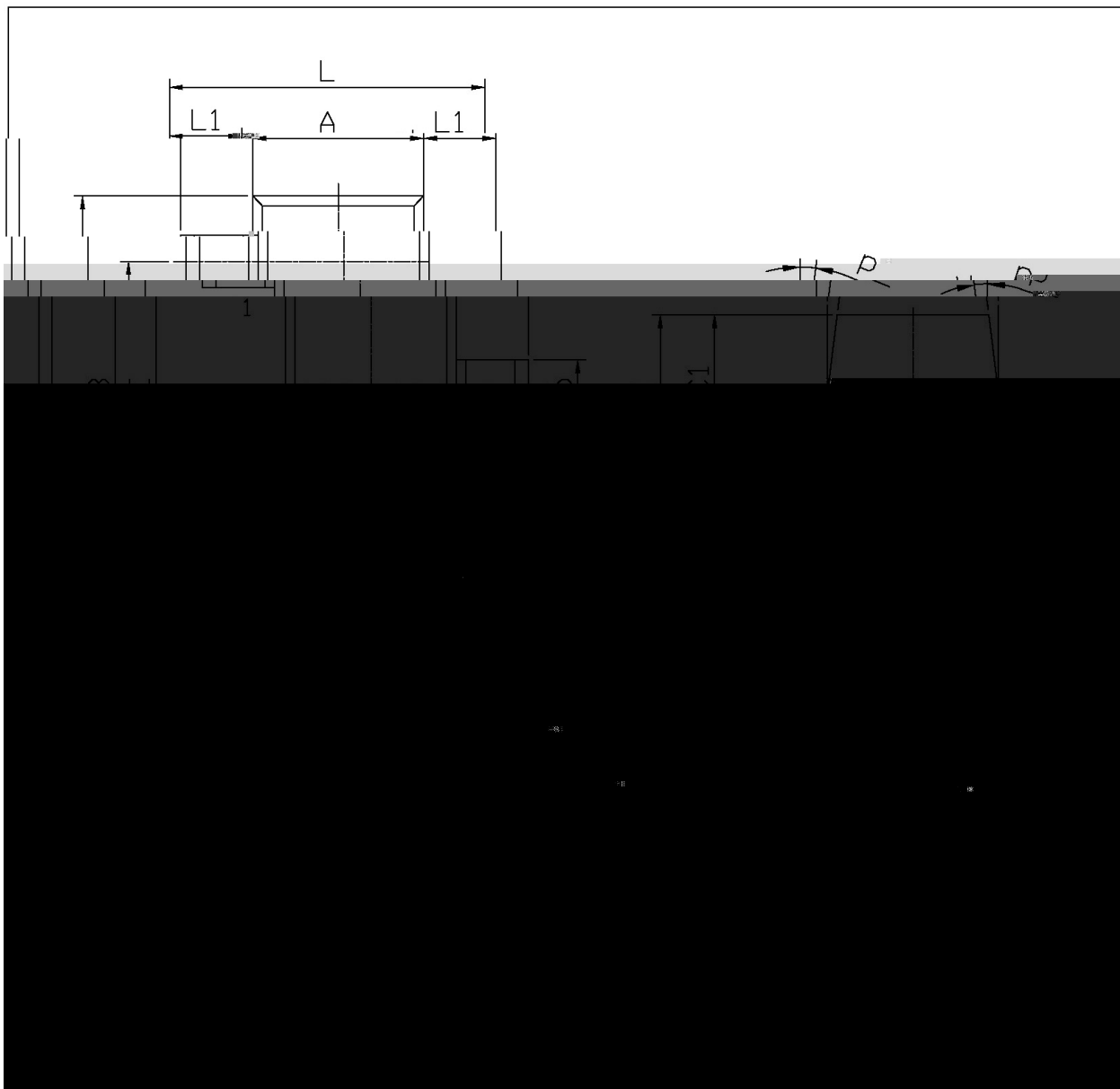
/ Electrical Characteristic Curve



/ Package Dimensions

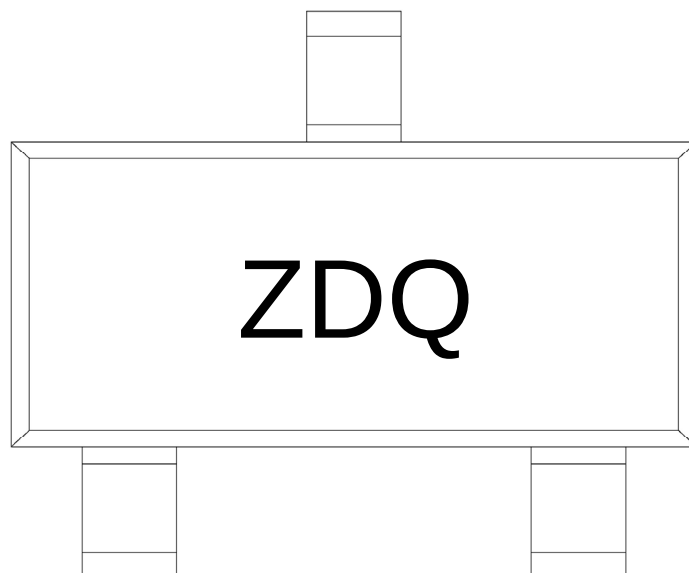
SOT-23

单位: mm





/ Marking Instructions



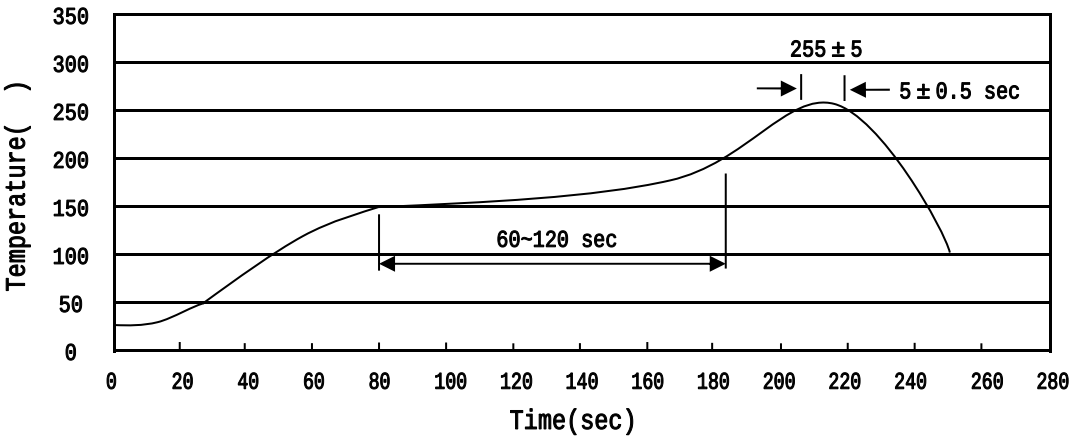
Q

Note:

ZD Product Type

Q: Automobile halogen-free product Code

() /



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.

/ Resistance to Soldering Heat Test Conditions

260 5 10 1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm³)		
	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 ×8	180×120×180	390×385×205

/ Notices