

BR2SA1576AQ

Rev.A Apr.-2023

/ Descriptions

Silicon PNP transistor in a SOT-323 Plastic Package.

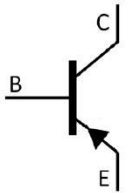
/ Features

Low noise, complementary pair with BR2SC4081WQ, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

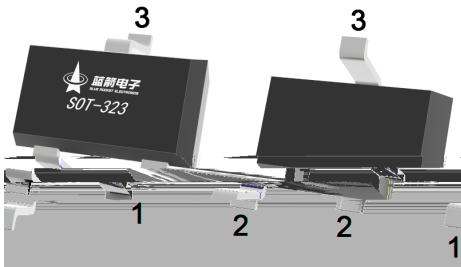
/ Applications

General small signal amplifier applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ hFE Classifications & Marking

h _{FE} Classifications Symbol	Q	R	S
h _{FE} Range	120 270	180 390	270 560
Marking	FQQ	FQR	FQS

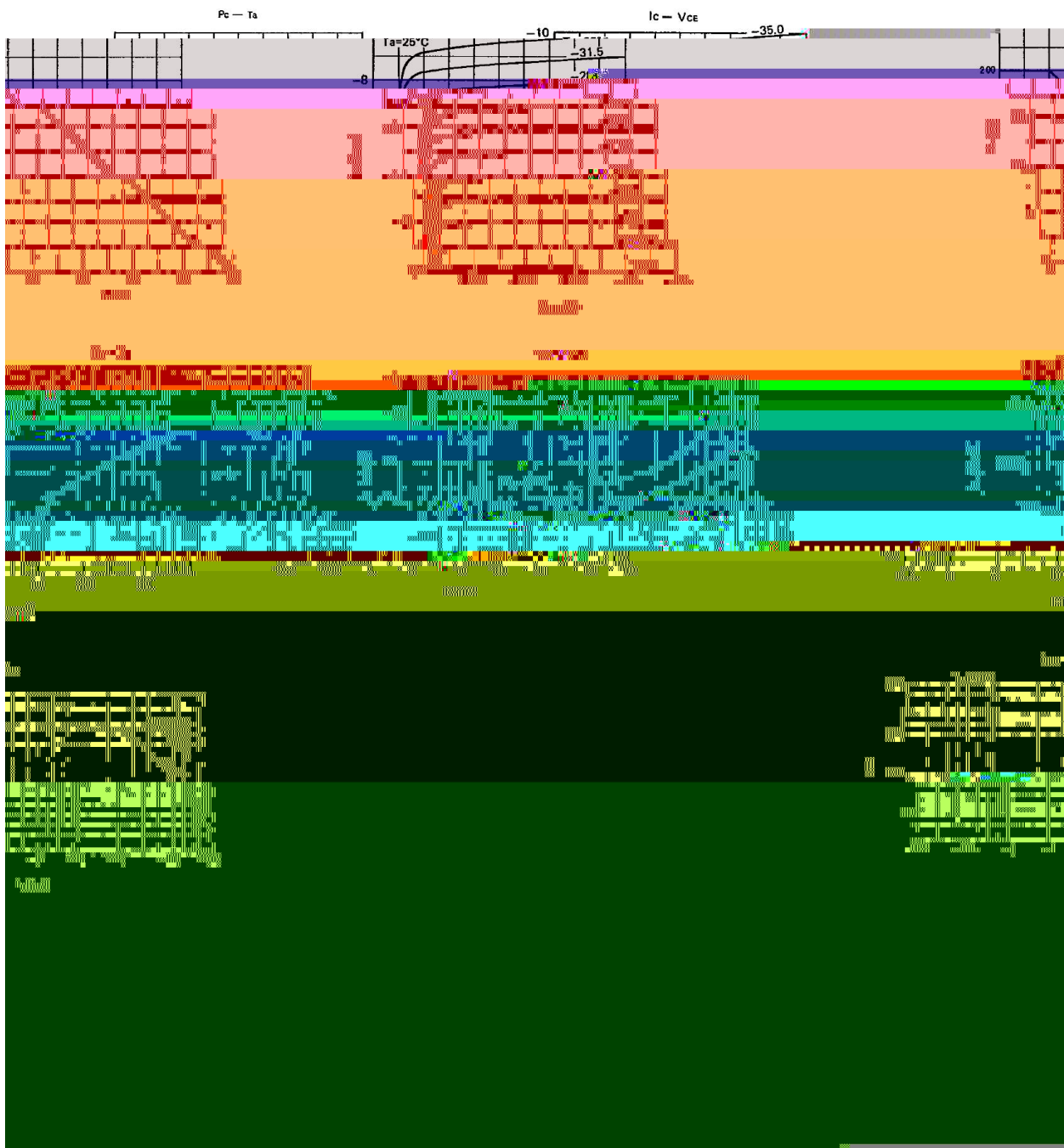
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V _{CBO}	-50	V
Collector to Emitter Voltage	V _{CEO}	-40	V
Emitter to Base Voltage	V _{EBO}	-5	V
Collector Current - Continuous	I _C	-100	mA
Collector Power Dissipation	P _C	200	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 Base Breakdown Voltage	V _{CBO}	I _C =-50 A I _E =0	-50			V
Collector to Emitter Breakdown Voltage	V _{CEO}	I _C =-1.0mA I _B =0	-40			V
Emitter to Base Breakdown Voltage	V _{EBO}	I _E =-50 A I _C =0	-5			V
Collector Cut-Off Current	I _{CBO}	V _{CB} =-30V I _E =0			-0.5	A
Emitter Base Cut-Off Current	I _{EBO}	V _{EB} =-4V I _C =0			-0.5	A
DC Current Gain	h _{FE}	V _{CE} =-6V I _C =-1mA	120		560	
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =-50mA I _B =-5mA			-0.5	V
Transition Frequency	f _T	V _{CE} =-12V I _E =2mA		140		MHz
Collector output capacitance	C _{ob}	V _{CB} =-12V f=1.0MHz		3.5		pF

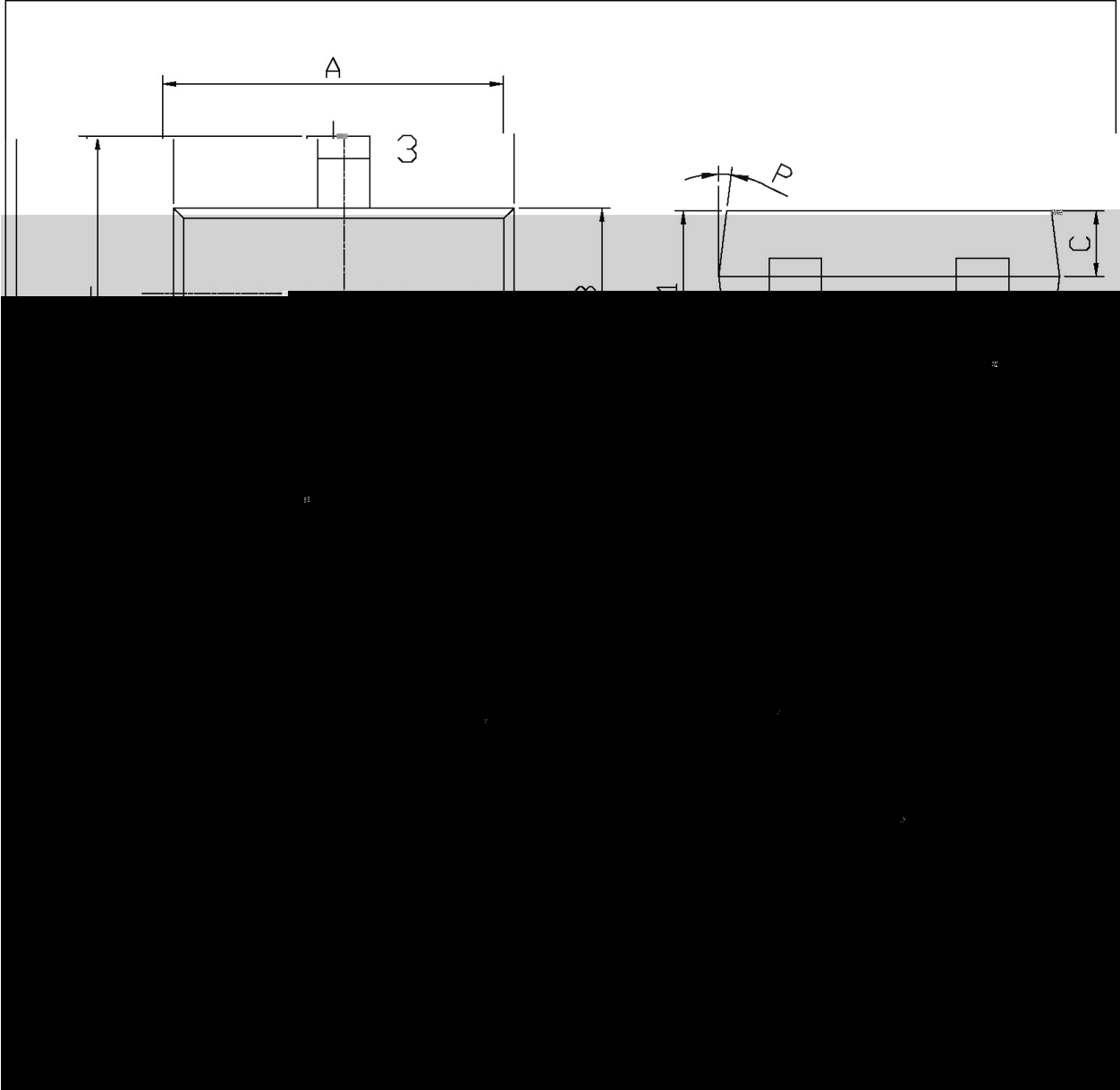
/ Electrical Characteristic Curve



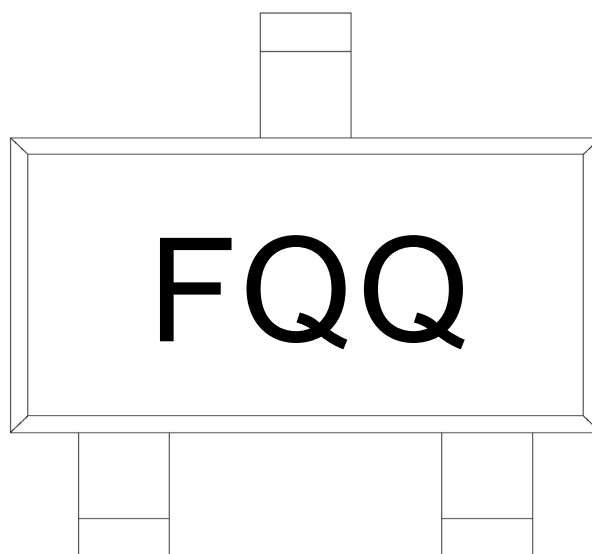
/ Package Dimensions

SOT-323

单位: mm



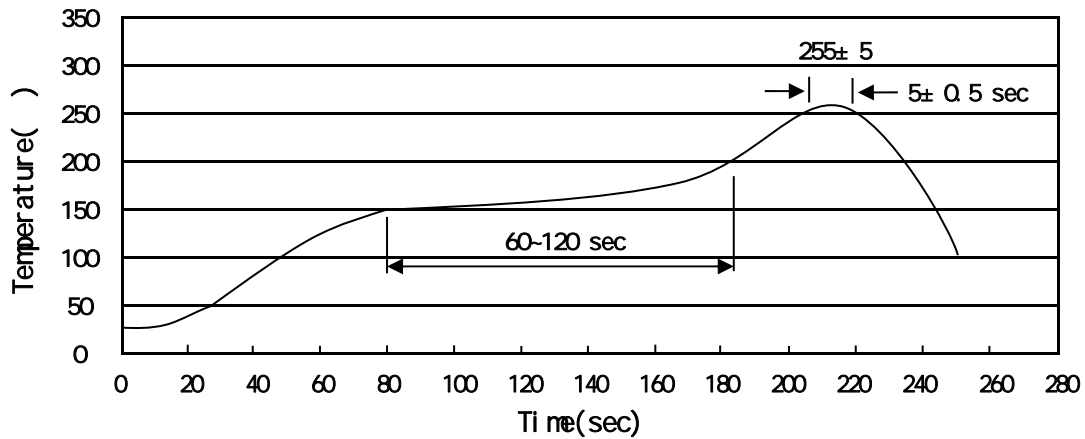
/ Marking Instructions



Note:

- F: Product Type
- Q: Automobile halogen-free product Code
- Q: h_{FE} Classifications Symbol

() / 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.

/ Resistance to Soldering Heat Test Conditions

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

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-323	3,000	10	30,000	6	180,000	7 x8	180x120x180	390x385x205

/ Notices