

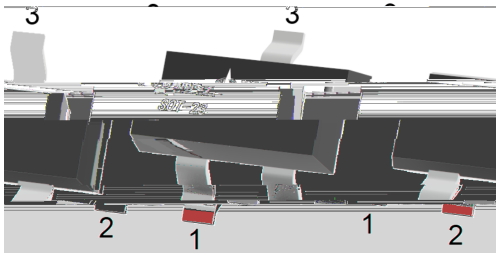
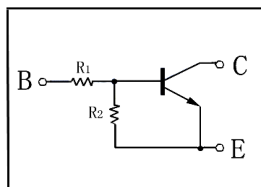
Rev.A Mar.-2023

SOT-23 NPN Silicon NPN Digital transistor in a SOT-23 Plastic Package.

AEC-Q101

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

Switching, inverter circuit, interface circuit and driver circuit applications , Meet the stringent requirements of automotive applications.

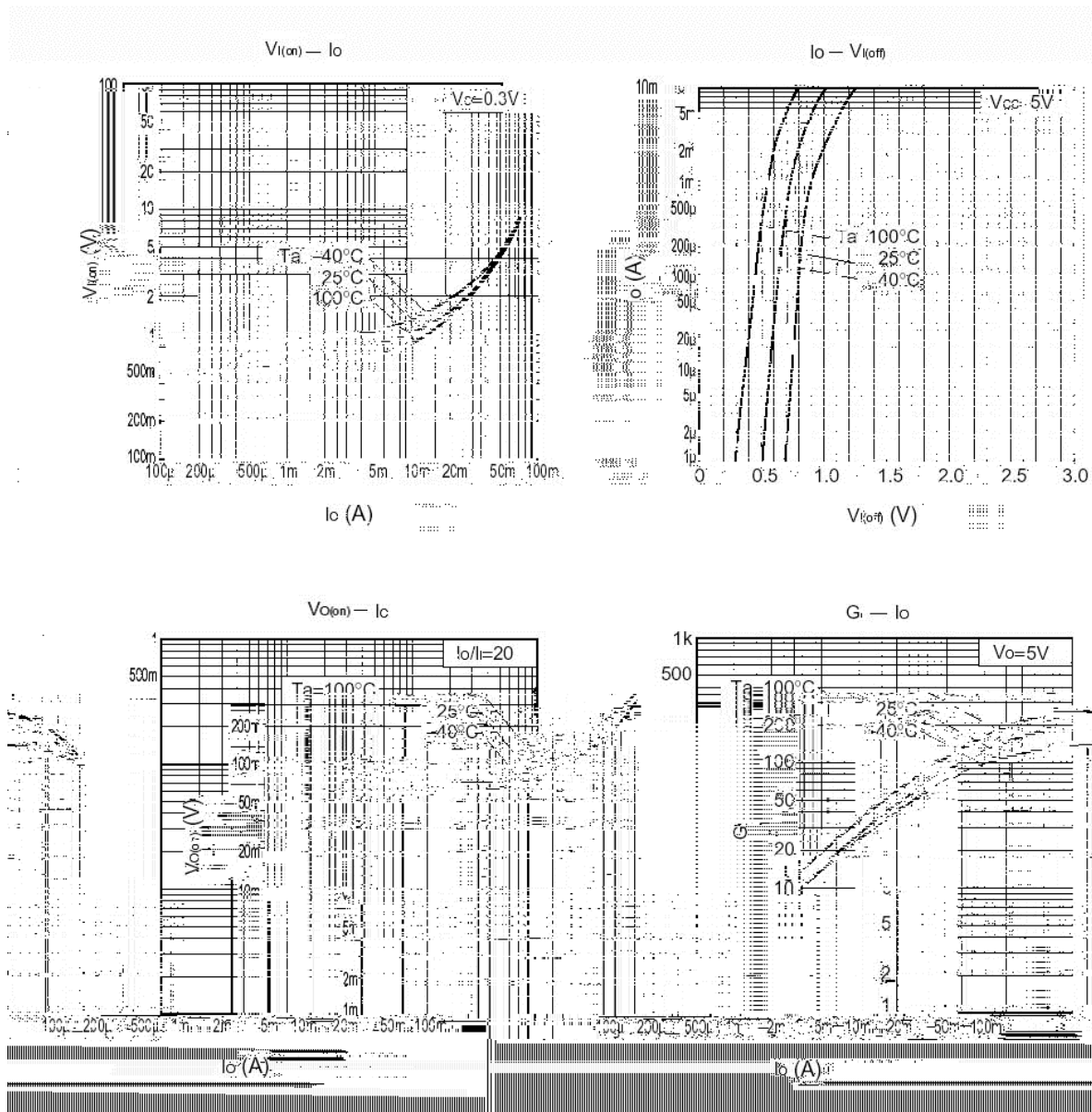


PIN 1 Base PIN 2 Emitter PIN 3 Collector

Marking	QE23
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Parameter	Symbol	Rating	Unit
Output Voltage	V_{CC}	50	V
Input Voltage	V_{IN}	30	V
		-5.0	V
Output Current	I_O	100	mA
	I_C	100	mA
Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

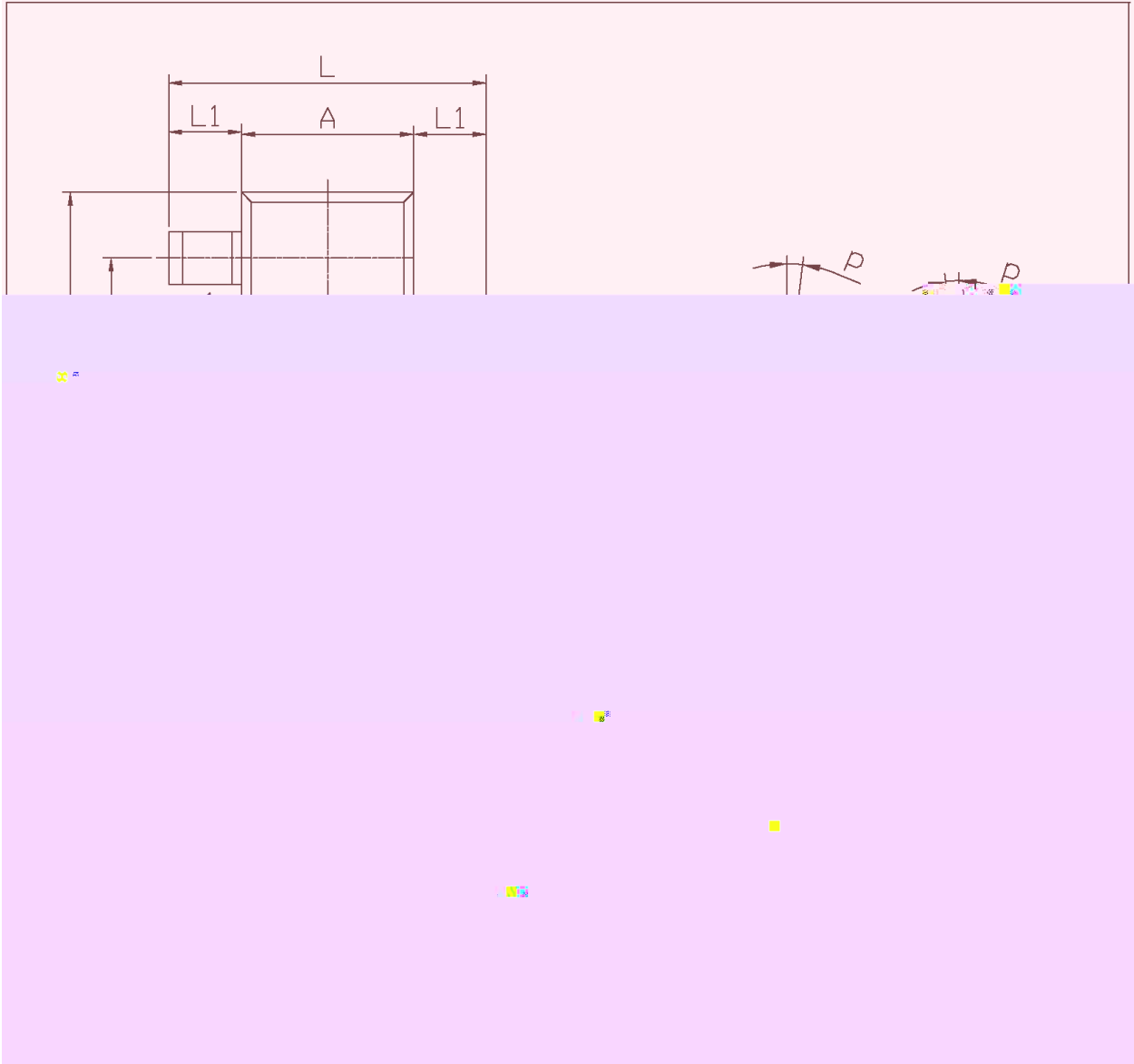
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage(OFF)	$V_{I(off)}$	$V_{CC}=5.0V$ $I_O=100\mu A$			0.5	V
Input Voltage(ON)	$V_{I(on)}$	$V_O=0.3V$ $I_O=5.0mA$	1.3			V
Output Voltage	$V_{O(on)}$	$I_O=5.0mA$ $I_I=0.25mA$		0.1	0.3	V
Input Current	I_I	$V_I=5.0V$			1.8	mA
Output Cut-off Current	$I_{O(off)}$	$V_{CC}=50V$ $V_I=0V$			0.5	μA
DC Current Gain	G_I	$V_O=5.0V$ $I_O=10mA$	80			
Transition Frequency	f_T	$V_{CE}=10V$ $I_E=-5.0mA$ $f=100MHz$		250		MHz
Resistance1	R_1		3.29	4.7	6.11	K Ω
Resistance Ratio	R_2/R_1		8.0	10	12	



Rev.A Mar.-2023

SOT-23

单位: mm





Q

E23

Note:

Q: Automobile halogen-free product Code

E23 Product Type Code



Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

- 115020060120sec;1.Preheating:150~200,Time:60~120sec.
- 2255±55±0.5sec;2.Peak Temp.:255±5,Duration:5±0.5sec.
- 3210/sec.3.Cooling Speed: 2~10/sec.

260±510±1 sec.Temp.:260±5Time:10±1 sec

/ 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-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205