

Rev.A Aug.-2022

SOT-89

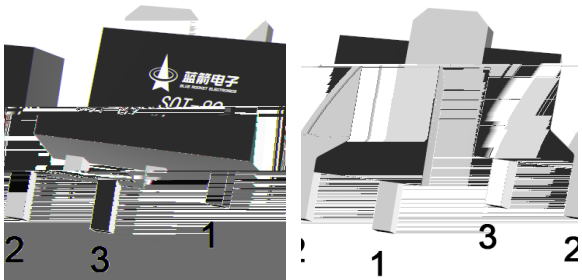
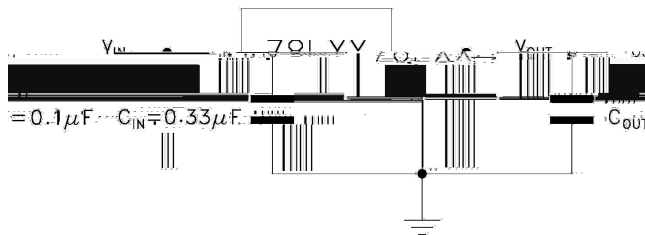
Voltage Regulator in a SOT-89 Plastic Package.

100mA,

AEC-Q100

3-Terminal regulators ,output current up to 100 mA, internal thermal overload protection and short-circuit limiting,Qualified to AEC-Q100 Standards for High Reliability, HF Product.

Voltage Regulator, Meet the stringent requirements of automotive applications.



PIN1 OUT    PIN 2 GND    PIN 3 IN

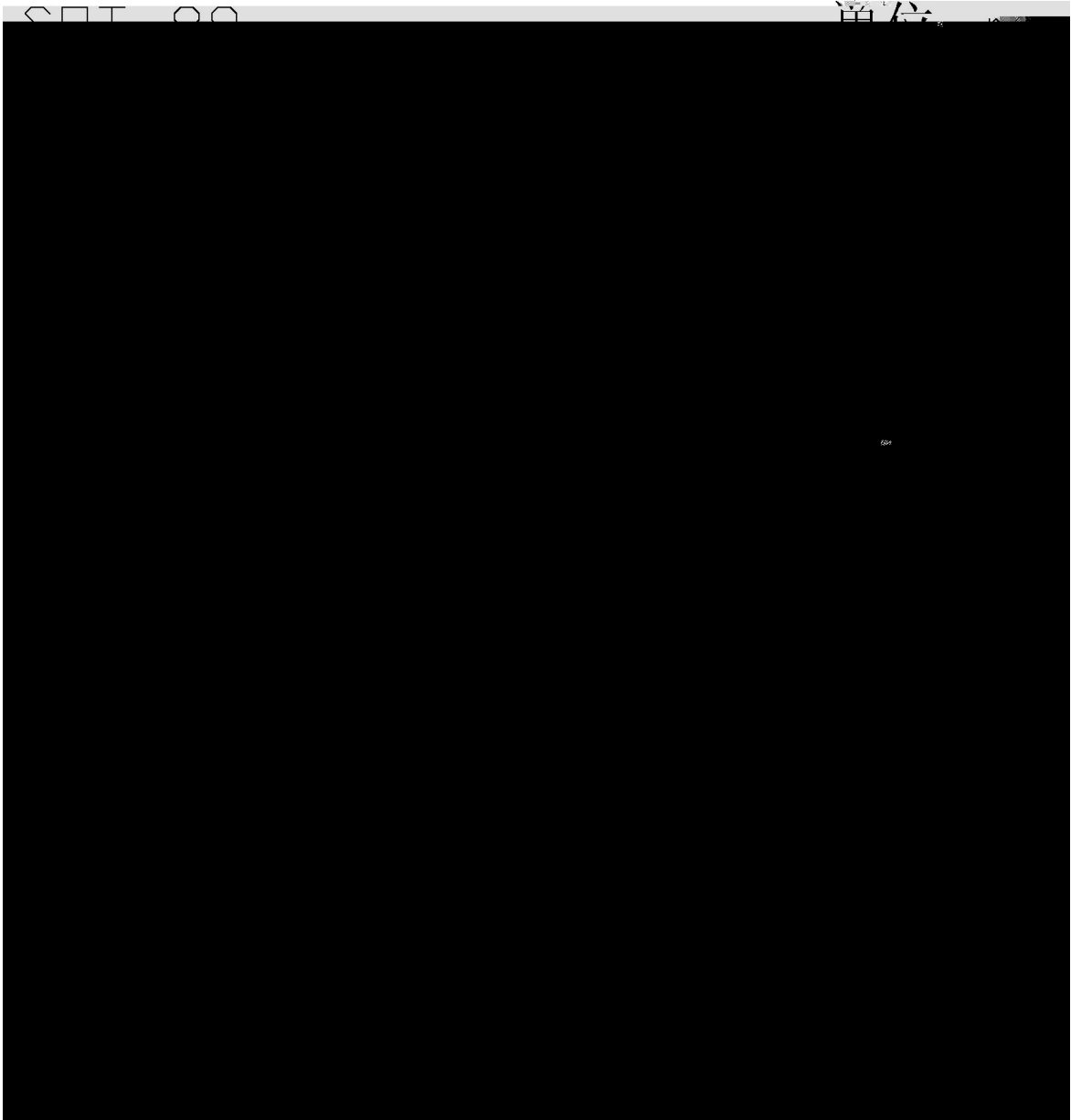
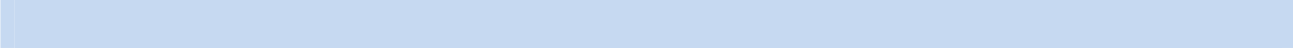
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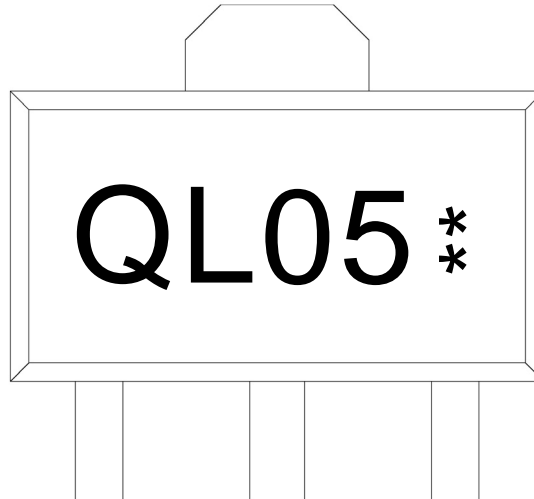
QL05 \*  
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Parameter	Symbol	Rating	Unit
Input voltage	$V_I$	30	V
Output current	$I_O$	100	mA
Operating virtual Junction temperature	$T_J$	0 125	
Power Dissipation	$P_D$	500	mW
Storage temperature range	$T_{stg}$	-65 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	$V_O$	$I_O = 40mA$ $T_J = 25$	4.80	5.0	5.2	V
		$I_O = 1mA$ to 40mA $V_I = 7V$ to 20V	4.75	5.0	5.25	V
		$I_O = 1mA$ to 70mA $V_I = 10V$	4.75	5.0	5.25	V
Input regulation	$V_O$	$V_I = 7V$ to 20V $T_J = 25$		32	150	mV
		$V_I = 8V$ to 20V $T_J = 25$		26	100	mV
Output regulation	$V_O$	$I_O = 1mA$ to 100mA $T_J = 25$		15	60	mV
		$I_O = 1mA$ to 40 mA $T_J = 25$		8	30	mV
Ripple rejection	RR	$V_I = 8V$ to 18V $f = 120Hz$ $T_J = 25$	41	49		dB
Output noise voltage	$V_N$	$f = 10Hz \sim 100KHz$ $T_J = 25$		42		V
Dropout voltage	$V_D$	$T_J = 25$		1.7		V
Bias current	$I_Q$	$T_J = 25$		3.8	6	mA
		$T_J = 125$			5.5	mA
Bias current change	$I_Q$	$V_I = 8V$ to 20V			1.5	mA
		$I_O = 1mA$ to 40mA			0.1	mA

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Q

L05

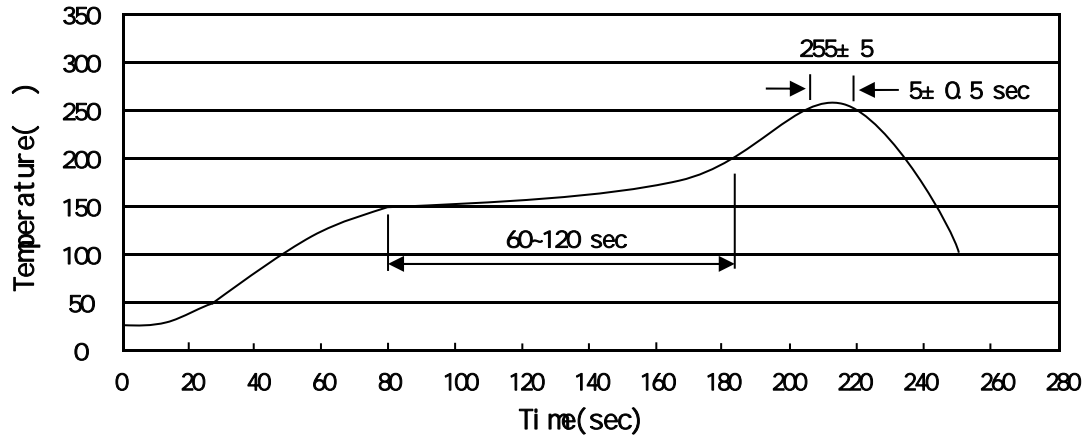
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Note:

Q: Automobile halogen-free product Code

L05: Product Type Code

\*\* : Lot No. Code, code change with Lot No

**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 <sup>3</sup> )		
SOT-89					7 x12	180x120x180	390x385x205