

/ Descriptions

SOT-89 Voltage Regulator in a SOT-89 Plastic Package.

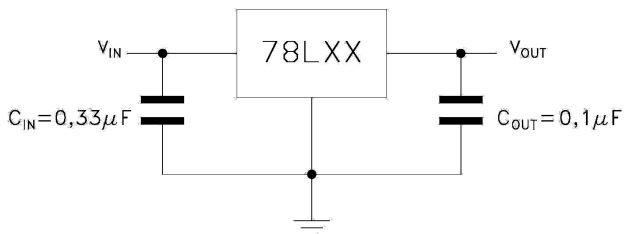
/ Features

100mA,
3-Terminal regulators, output current up to 100 mA, internal thermal overload protection and short-circuit limiting, HF Product.

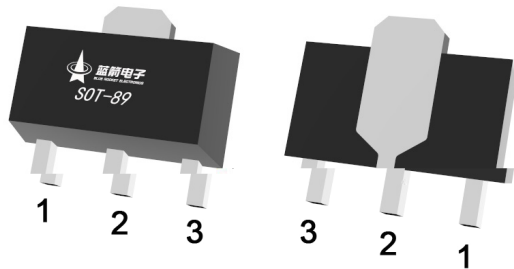
/ Applications

Voltage Regulator.

/ Equivalent Circuit or Application Circuit



/ Pinning



PIN1 OUT PIN 2 GND PIN 3 IN

/ Marking

Marking	HL12
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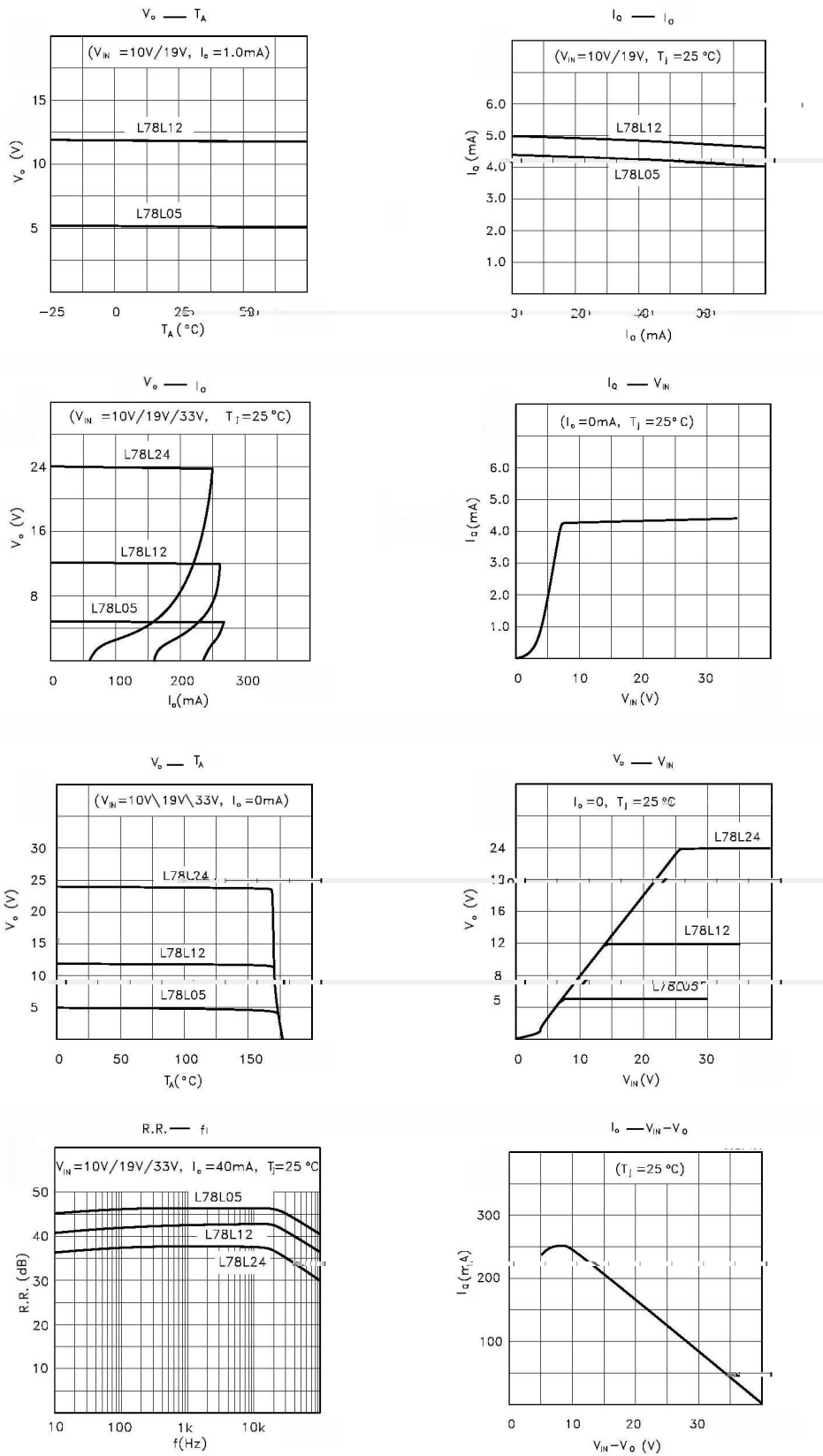
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Input voltage	V_I	35	V
Output current	I_O	100	mA
Operating Temperature Range	T_{OPR}	-40 125	
Power Dissipation	P_D	500	mW
Storage temperature range	T_{stg}	-65 150	

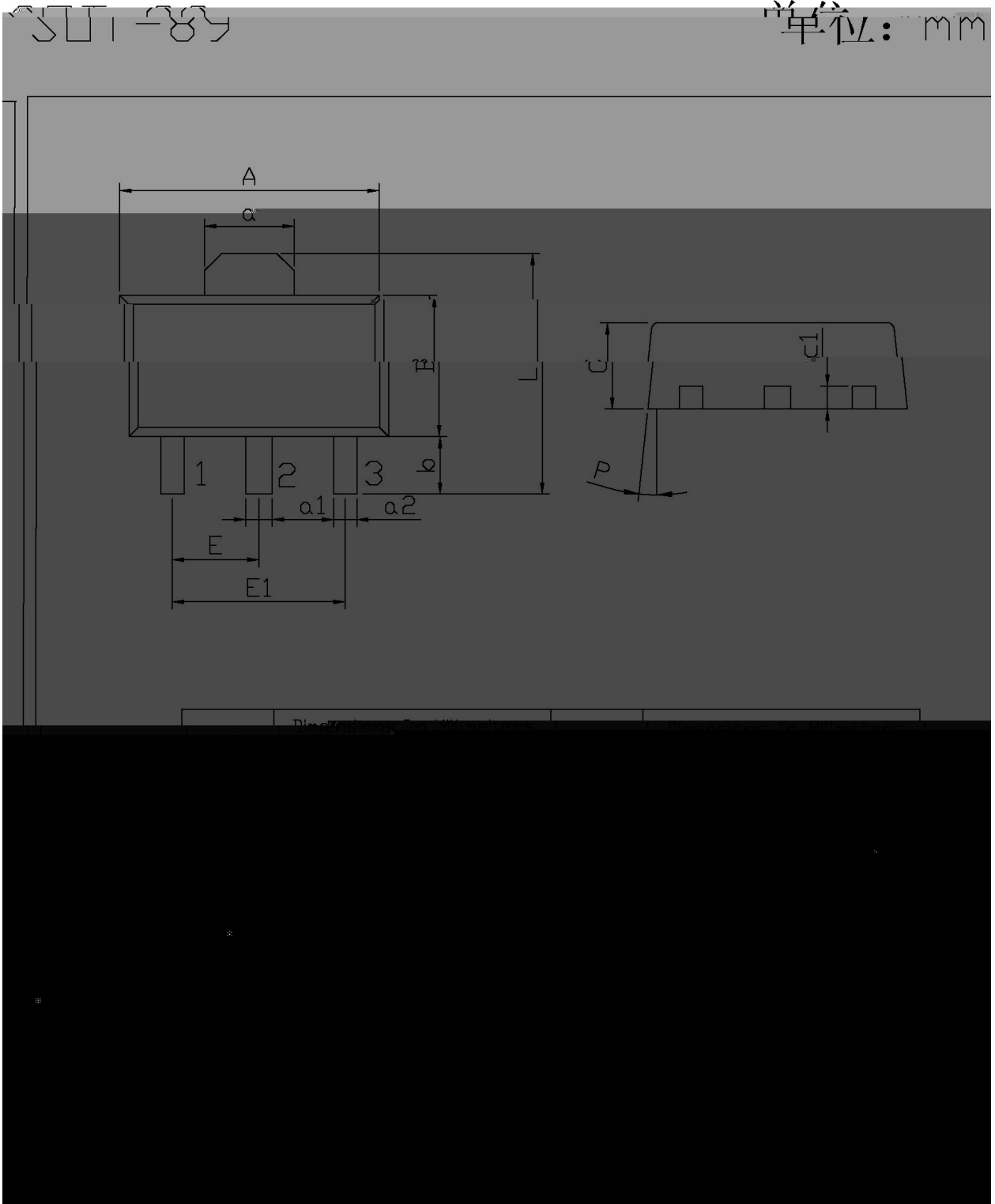
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_O	$I_O=40mA$ $T_j=25$	11.5	12	12.5	V
		$I_O=1mA$ to 40mA $V_I=14V$ to 27V	11.4	12	12.6	V
		$I_O=1mA$ to 70mA $V_I=19V$	11.4	12	12.6	V
Input regulation	V_O	$V_I=14.5V$ to 27V $T_j=25$		55	250	mV
		$V_I=16V$ to 27V $T_j=25$		49	200	mV
Ripple rejection	RR	$V_I=15V$ to 25V $f=120Hz$ $T_j=25$	37	42		dB
Output regulation	V_O	$I_O=1mA$ to 100mA $T_j=25$		22	100	mV
		$I_O=1mA$ to 40mA $T_j=25$		13	50	mV
Output noise voltage	V_N	$f=10Hz$ to 100KHz $T_j=25$		70		μV
Dropout voltage	V_D	$T_j=25$		1.7		V
Bias current	I_Q	$T_j=25$		4.3	6.5	mA
		$T_j=125$			6.0	mA
Bias current change	I_Q	$V_I=16V$ to 27V			1.5	mA
		$I_O=1mA$ to 40mA			0.1	mA

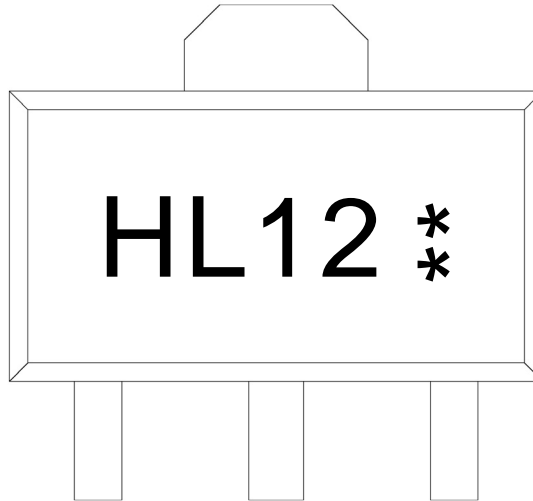
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



H

L12

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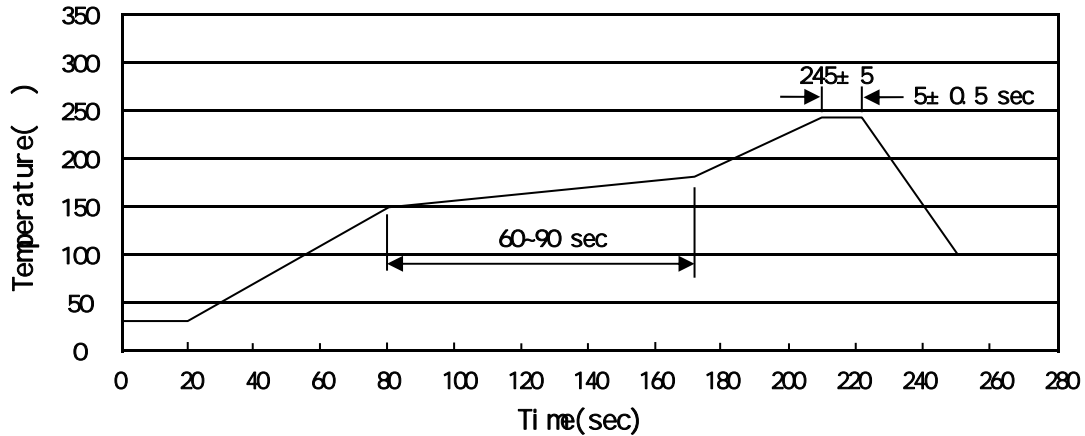
Note:

H: Company Code

L12: Product Type Code

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

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|----|-----------|---|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245±5 | | | 5±0.5sec; | 2.Peak Temp.:245±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: mm ³)		
	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-89	1,000	7	7,000	6	42,000	7 x12	180x120x180	390x385x205

/ Notices