

/ Descriptions

TO-92

Voltage Regulator in a TO-92 Plastic Package.

/ Features

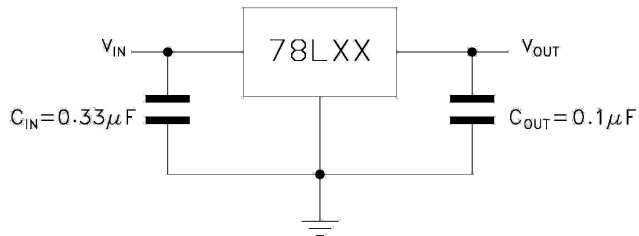
100mA,

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

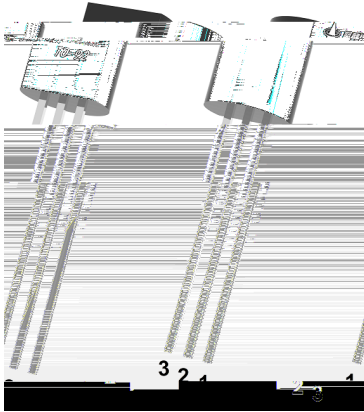
/ Applications

Voltage Regulator.

/ Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN

PIN 2 GND

PIN 3 OUT

/ Marking

See Marking Instructions.

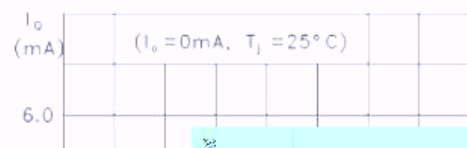
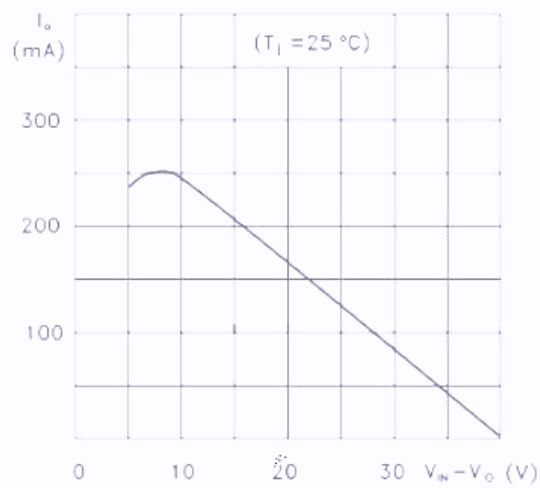
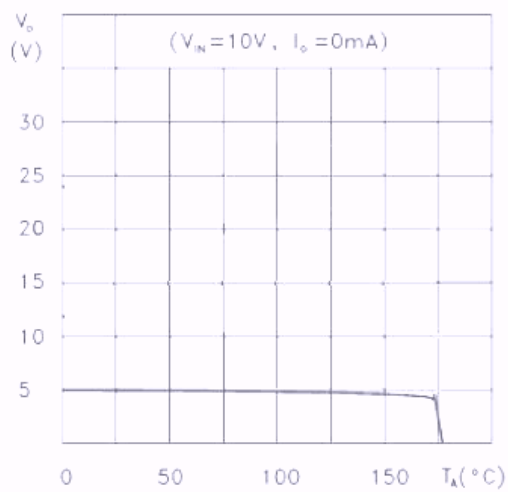
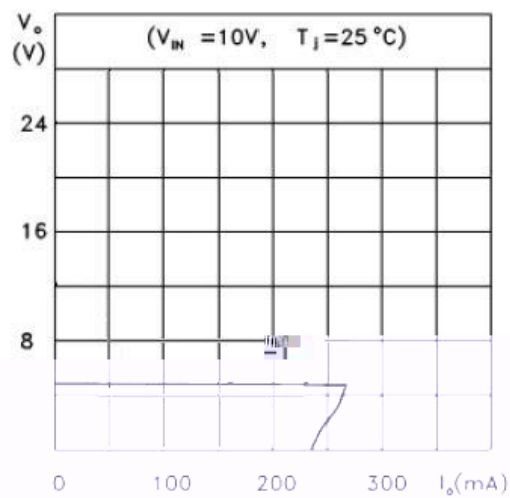
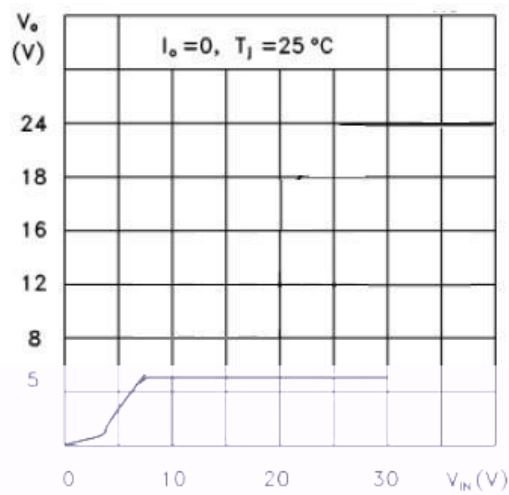
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

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($T_a=25^\circ\text{C}$ $V_I=23\text{V}, I_O=40\text{mA}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_O	$I_O=40\text{mA}$ $T_J=25^\circ\text{C}$	14.4	15	15.6	V
		$I_O=1\text{mA to }40\text{mA}$ $V_I=17.5\text{V to }30\text{V}$	14.25		15.75	V
		$I_O=1\text{mA to }70\text{mA}$ $V_I=23\text{V}$	14.25		15.75	V
Input regulation	V_O	$V_I=17.5\text{V}$ $T_J=25^\circ\text{C}$			300	mV
		$V_I=20\text{V}$ $T_J=25^\circ\text{C}$			250	mV
Ripple rejection	RR	$V_I=18.5\text{V to }28.5\text{V}$ $T_J=25^\circ\text{C}$ $f=120\text{Hz}$	34	39		dB
Output regulation	V_O	$I_O=1\text{mA to }100\text{mA}$ $T_J=25^\circ\text{C}$			150	mV
		$I_O=1\text{mA to }40\text{mA}$ $T_J=25^\circ\text{C}$			75	mV
Output noise voltage	V_N	$f=10\text{Hz to }100\text{KHz}$ $T_J=25^\circ\text{C}$		90		μV
Dropout voltage	V_D	$T_J=25^\circ\text{C}$		1.7		V
Bias current	I_Q	$T_J=25^\circ\text{C}$			6.5	mA
		$T_J=125^\circ\text{C}$			6	mA
Bias current change	I_Q	$V_I=20\text{V to }30\text{V}$			1.5	mA
		$I_O=1\text{mA to }40\text{mA}$			0.1	mA

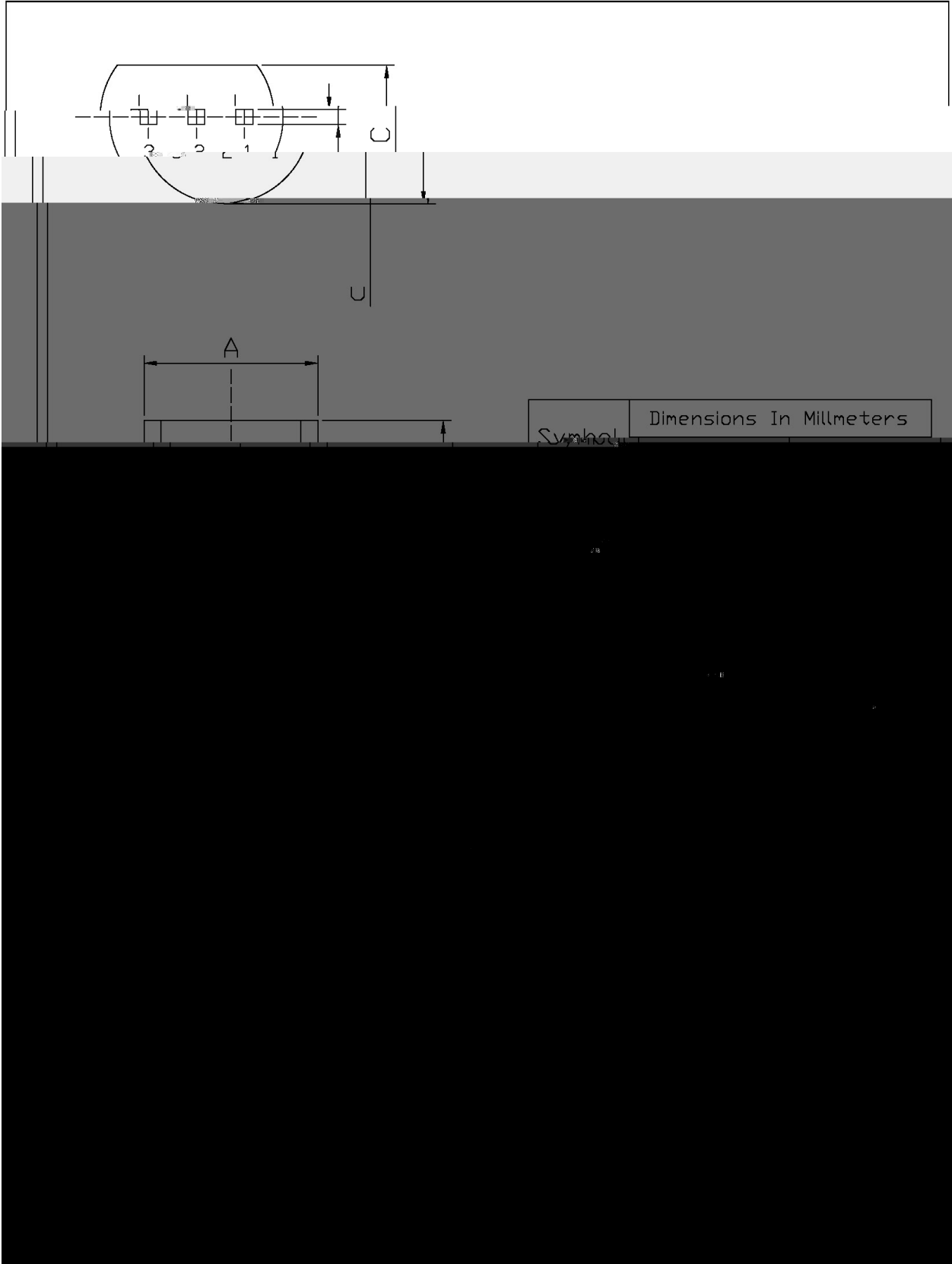
/ Electrical Characteristic Curve



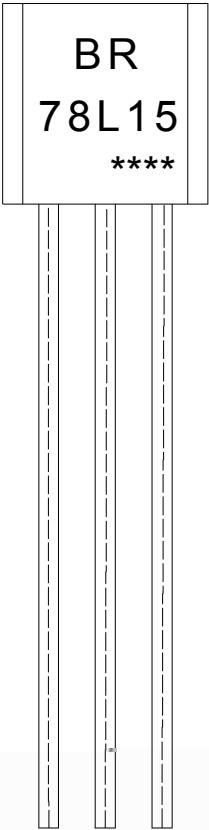
/ Package Dimensions

TO-92

Unit: mm



/ Marking Instructions



BR

78L15

Note:

BR:	Company Code
78L15:	Product Type
****:	Lot No. Code, code change with Lot No

() / Temperature Profile for Dip Soldering(Pb-Free)

Note:

- 1

25 150

60 90sec;

1.Preheating:25~150 , Time:60~90sec.
- 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

270±5 10±1 sec. Temp.:270±5℃ Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type	Units					Dimension	(unit mm3)
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /		
						Bag	