5 é / Descriptions

: 5 .> / / x 9 ² … ˜ož Voltage Regulator in a TO-92 Plastic Package.

¤ ª / Features

€ l 9 ² … ˜ k ÿ ß v ä S ' Ä — ½ ‘ y ? è ’ òož

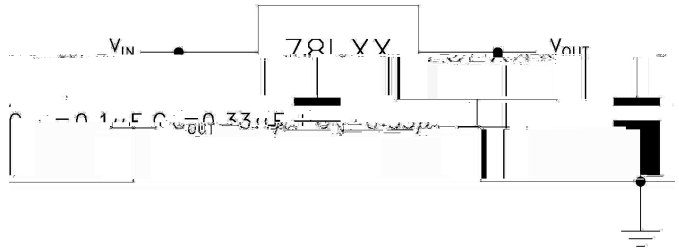
3-Terminal regulators ,output current up to 100 mA, internal thermal overload protection and short-circuit limiting.

Ð ÷ / Applications

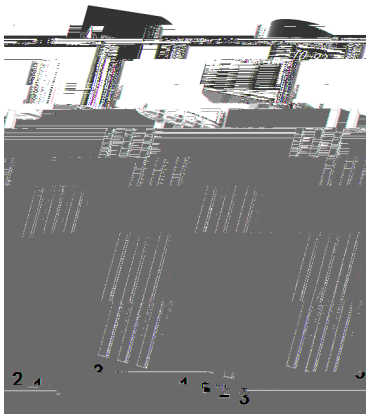
9 ² … ˜ož

Voltage Regulator.

Ã W] Ô · / € Ð Ô · / Equivalent Circuit or Application Circuit



• Û - æ / Pinning



PIN1 y IN PIN 2 y GND PIN 3 y OUT

, M V / Marking

• - ~ ª ¢ož

See Marking Instructions.

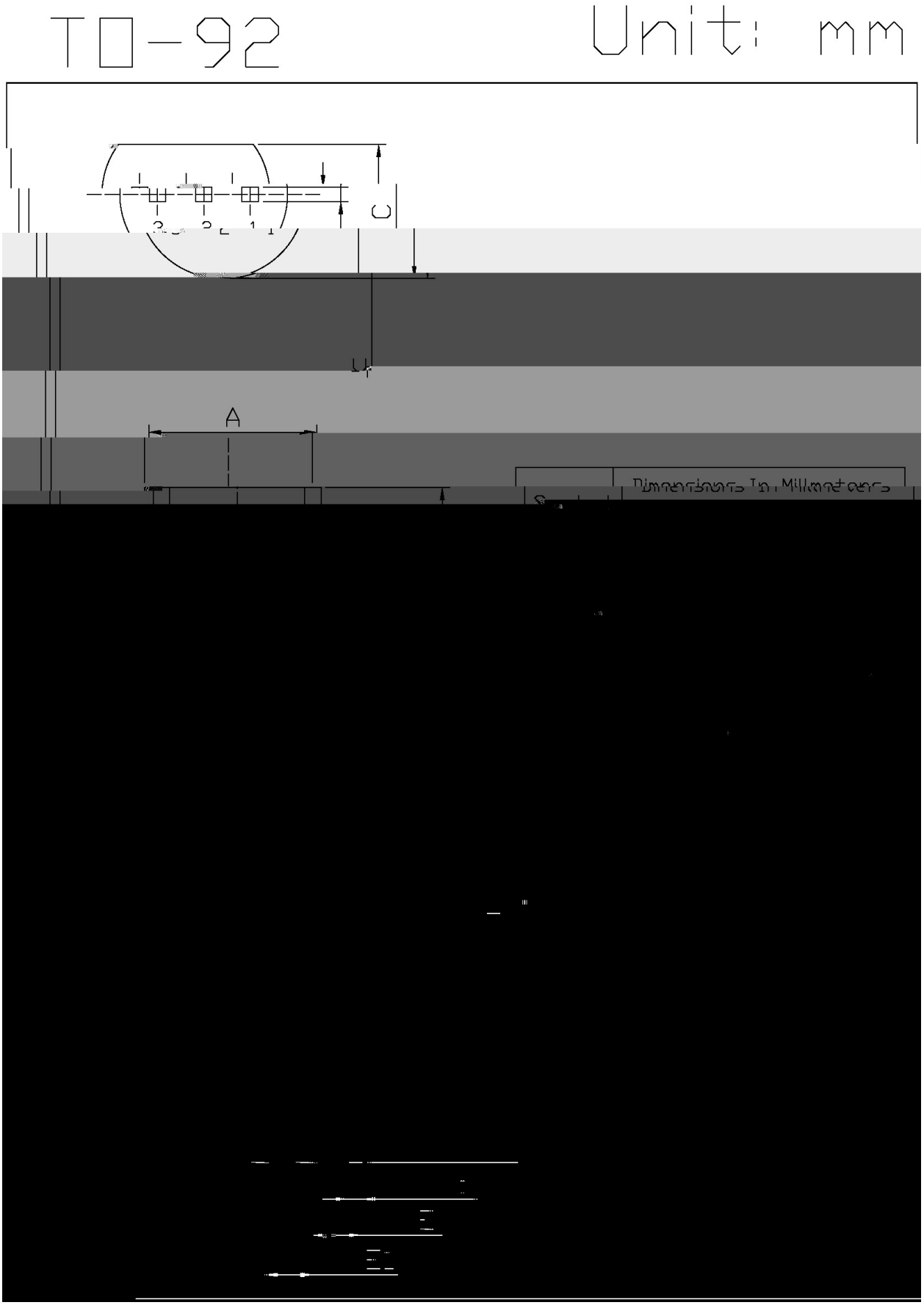
Ã a ? d / Absolute Maximum Ratings(Ta=25 ;)

@ ƒ Parameter	… Z Symbol	ƒ › Rating	% y 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	

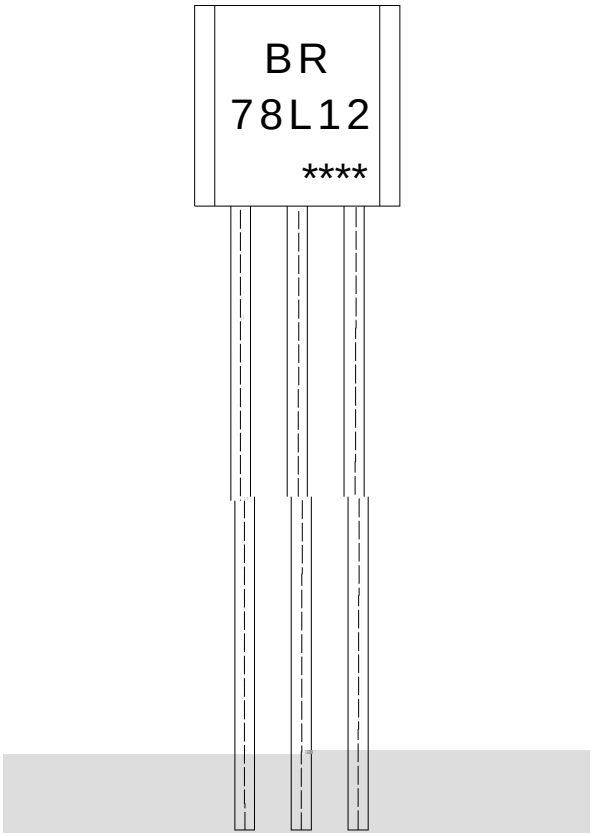
Ô4ì × ? d / Electrical Characteristics(Ta=25 ; g Vi=19V,Io=40mA g unless otherwise specified)

@ ƒ Parameter	… Z Symbol	y ¡ Ú ^ Test Conditions	Â 4 › Min	Á º › Typ	Â Ý › Max	% y Unit
Output voltage	V_O	I_o Ù40mA 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	. Vo	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 T_j=25 f=120Hz	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		V
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

Ø ¤ =) ¢ / Package Dimensions



, M y ƒ / Marking Instructions



ª ¢ y

BR y ¸ [W A

78L12 y D } º Z

y ÿ D Z W A k š ÿ D Z J

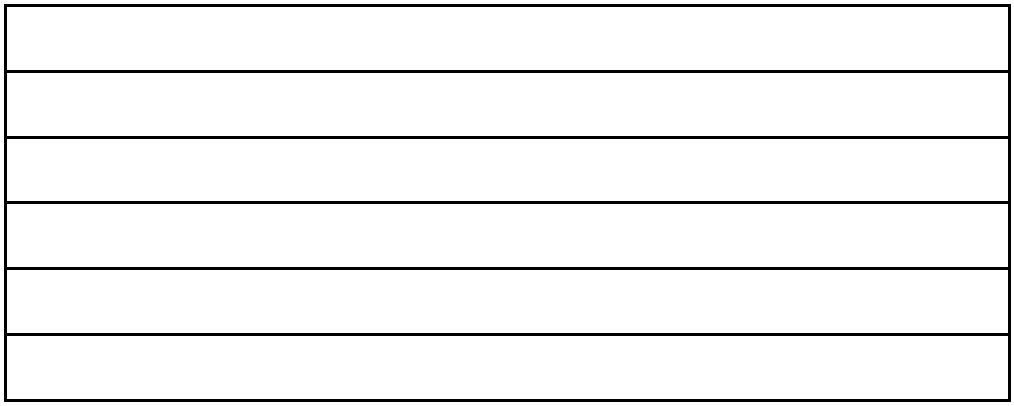
Note:

BR: Company Code

78L12: Product Type

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

G PD t … • Ž ¢ (x /) / Temperature Profile for Dip Soldering(Pb-Free)



ª ¢ y

1o• Ä ½ “ † 25 ½150 - k ž • 60 ½90sec;

2o• Q › “ † 255 r5 - k ž • 4 Ò 5 r0.5sec;

3o•D N ò i Ò 0 , † 2 ½10 - /sec.

Note:

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

2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.

3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“ † y 270 r5 - ž • y 10 r1 sec. Temp.:270±5 Time:10±1 sec

G P á / Packaging SPEC.

• ^ x / BULK

Package Type 7>û ˜ E	Units ;>û ¦H					Dimension ;>û p . (unit Æmm3)		
	Units/Bag />Á	Bags/Inner Box >Á-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Bag>Á	Inner Box×	Outer Box1ç