

/ Descriptions

TO-92 Voltage Regulator in a TO-92 Plastic Package.

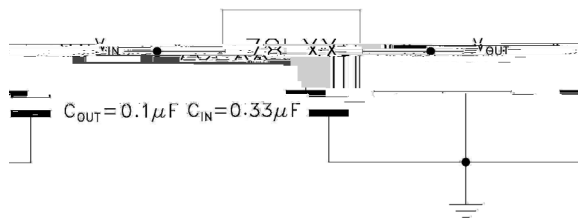
/ Features

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

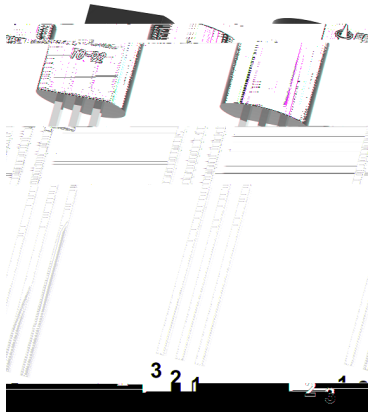
/ Applications

Voltage Regulator.

/ Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN PIN 2 GND PIN 3 OUT

/ Marking

See Marking Instructions.

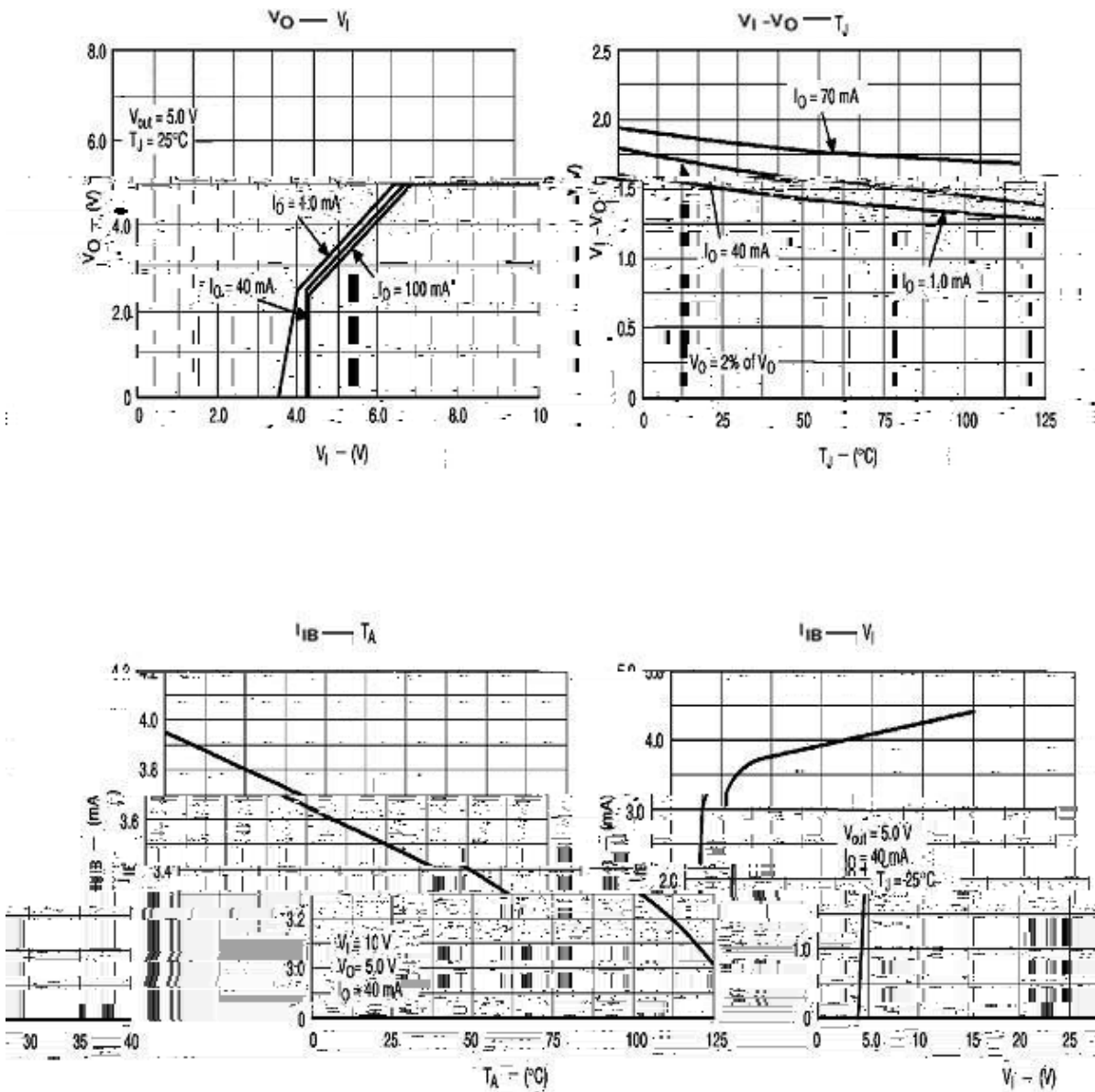
/ Absolute Maximum Ratings($T_a=25$)

Parameter	Symbol	Rating	Unit
Input voltage	V_I	30	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($T_a=25$ $V_I=10V, I_O=40mA$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_O	$I_O=40mA$ $T_j=25^\circ C$	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	ΔV_O	$V_I=7V$ to 20V $T_j=25^\circ C$		32	150	mV
		$V_I=8V$ to 20V $T_j=25^\circ C$		26	100	mV
Output regulation	ΔV_O	$I_O=1mA$ to 100mA $T_j=25^\circ C$		15	60	mV
		$I_O=1mA$ to 40 mA $T_j=25^\circ C$		8	30	mV
Ripple rejection	RR	$V_I=8V$ to 18V $f=120Hz$ $T_j=25^\circ C$	41	49		dB
Output noise voltage	V_N	$f=10Hz-100KHz$ $T_j=25^\circ C$		42		μV
Dropout voltage	V_D	$T_j=25^\circ C$		1.7		V
Bias current	I_Q	$T_j=25^\circ C$		3.8	6	mA
		$T_j=125^\circ C$			5.5	mA
Bias current change	ΔI_Q	$V_I=8V$ to 20V			1.5	mA
		$I_O=1mA$ to 40mA			0.1	mA

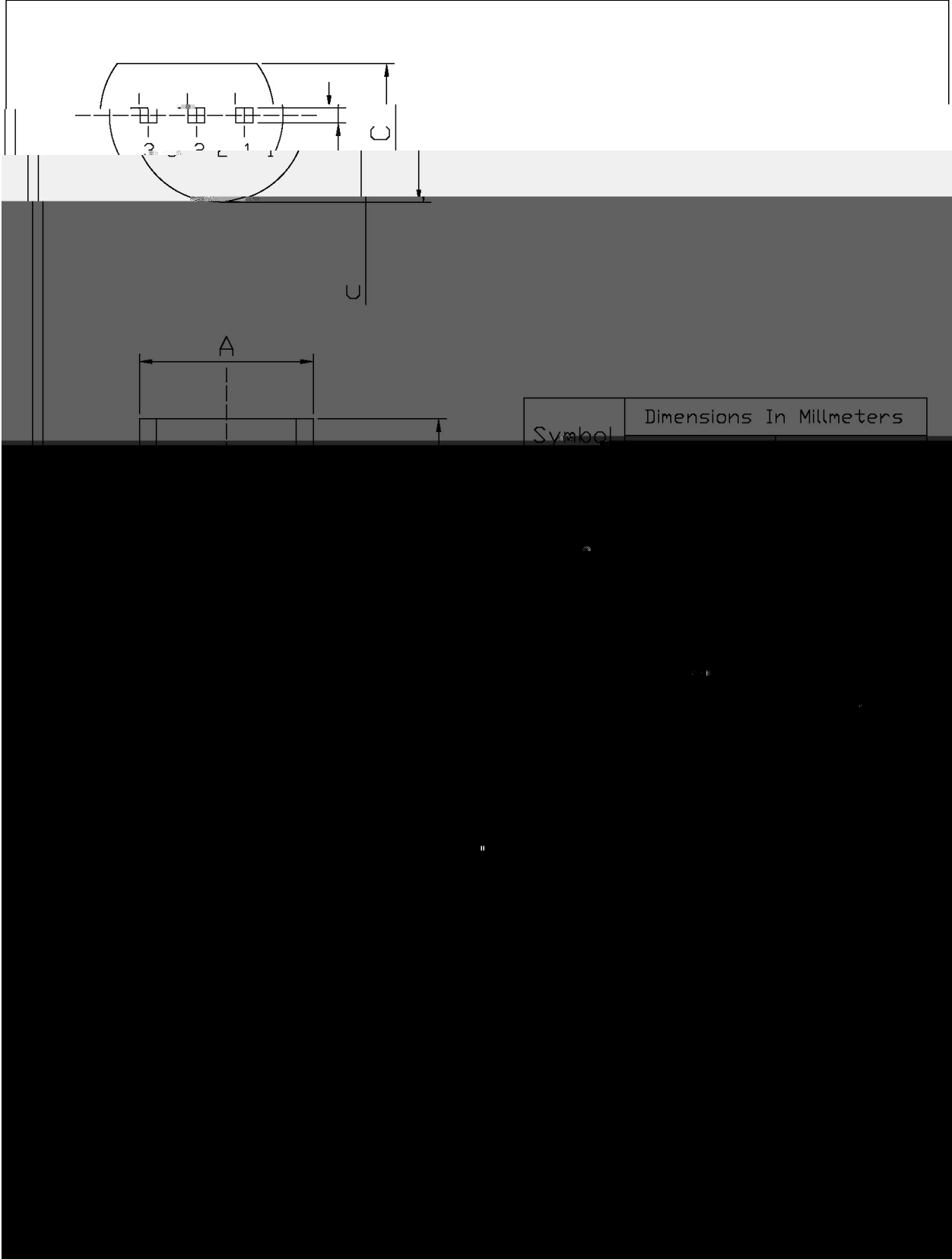
/ Electrical Characteristic Curve



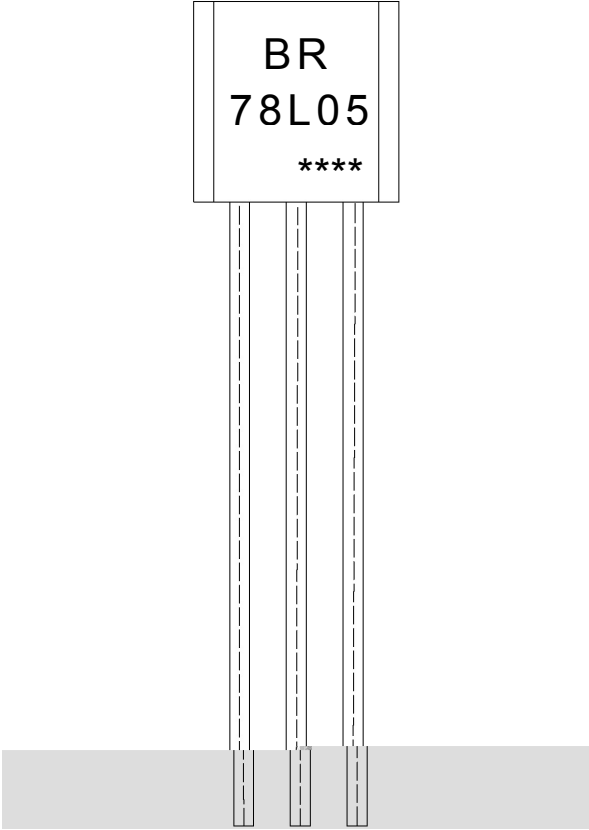
/ Package Dimensions

TO-92

Unit: mm



/ Marking Instructions



BR

78L05

Note:

BR: Company Code

78L05: Product Type

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

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

- | | | | | | |
|---|-------|-----|----|-----------|---|
| | | | | | |
| 1 | 25 | 150 | 60 | 90sec; | Note:
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	Inner Boxx	