

7805A

Rev.C Jun.-2024

/ Descriptions

TO-220 Voltage Regulator in a TO-220 Plastic Package.

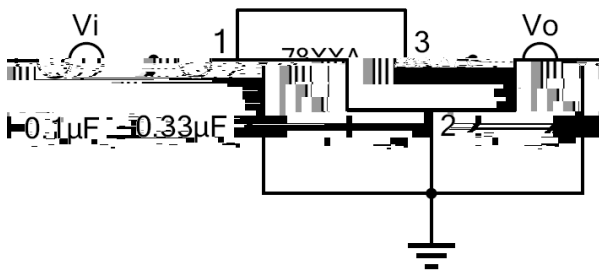
/ Features

1.0A,
3-Terminal regulators ,output current up to 1.0A, internal thermal overload protection and short-circuit limiting.

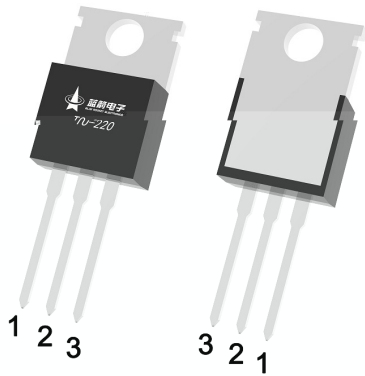
/ Applications

Voltage Regulator.

/ Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN

PIN 2 GND

PIN 3 OUT

/ Marking

See Marking Instructions.

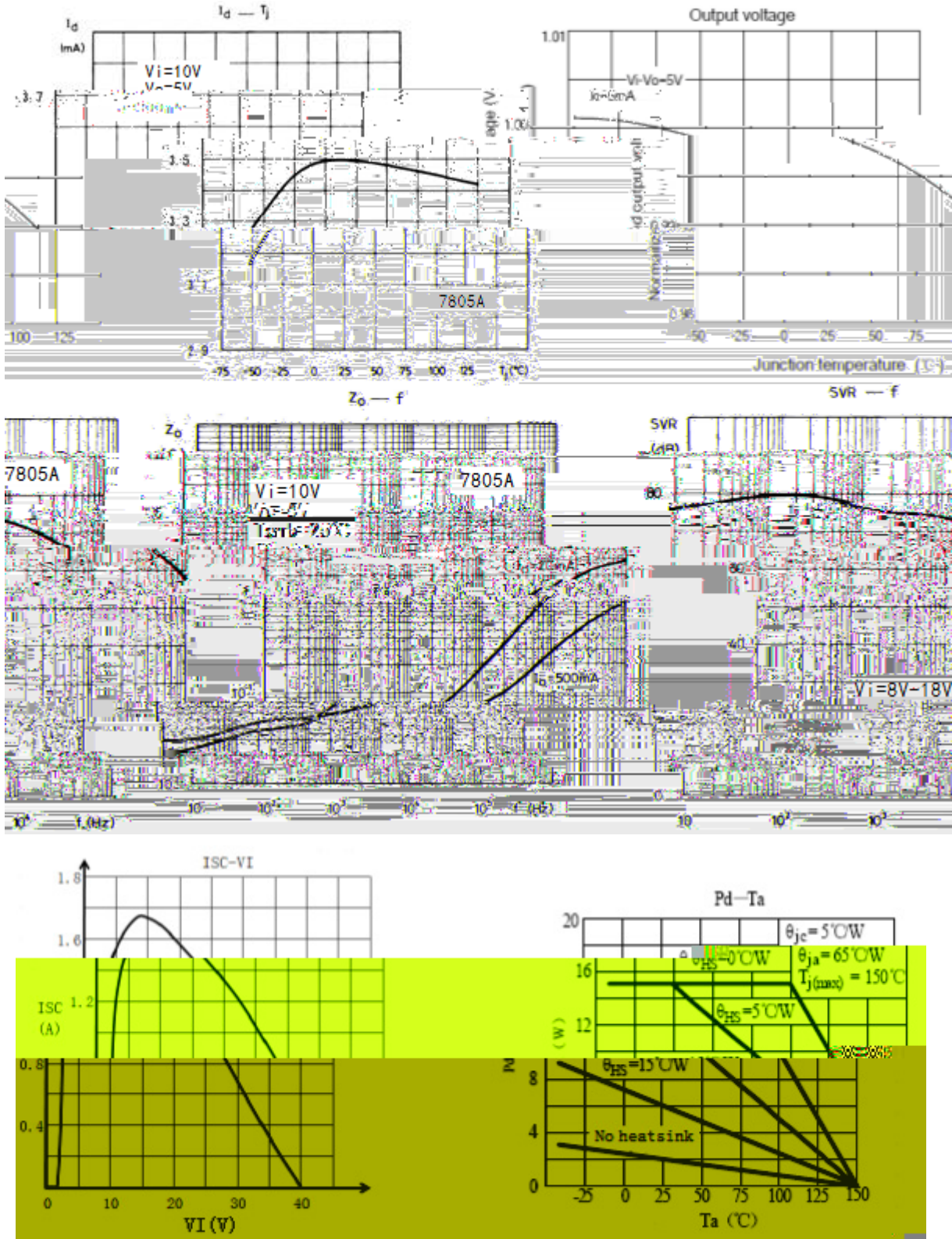
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Input voltage	V_i	7~35	V
Power Dissipation	P_D	Internally Limited	W
Thermal Resistance Junction-ambient	R_{JA}	65	$^{\circ}C/W$
Thermal Resistance Junction-case	R_{JC}	5.0	$^{\circ}C/W$
Operating Temperature Range	T_{OPR}	-40 125	$^{\circ}C$
Storage temperature range	T_{stg}	-65 150	$^{\circ}C$

/ Electrical Characteristics($V_i=10V, I_o=500mA, T_j=-30 \sim 125$,unless otherwise specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_j=25^{\circ}C$	4.8	5.0	5.2	V
		$V_i=7V\sim 20V$ $I_o=5mA\sim 1.0A$ $P_D 15W$	4.75	5.0	5.25	V
Load Regulation	V_{Load}	$T_j=25^{\circ}C$ $I_o=5mA\sim 1.0A$			100	mV
		$T_j=25$ $I_o=250mA\sim 750mA$			50	mV
Line Regulation	V_{Line}	$T_j=25^{\circ}C$ $V_i=7V\sim 25V$			100	mV
		$T_j=25^{\circ}C$ $V_i=8V\sim 12V$			50	mV
Quiescent Current	I_q	$T_j=25$			8.0	mA
Quiescent Current Change	I_q	$V_i=7V\sim 25V$			0.8	mA
		$I_o=5mA\sim 1.0A$			0.5	mA
Output Voltage Drift	V_o/ T	$I_o=5mA$ $T_j=0\sim 125$		-0.4		mV/ $^{\circ}C$
Output Noise Voltage	eN	B=10Hz~100KHz $T_j=25$		42		$\mu V/V_o$
Supply Voltage Rejection	SVR	$V_i=8V\sim 18V$ $f=120Hz$	62			dB
Dropout Voltage	V_d	$I_o=1.0A$ $T_j=25$		2.0		V
Output Resistance	R_o	$f=1KHz$		15		m
Short Circuit Current	I_{sc}	$V_i=35V$ $T_j=25$		220		mA

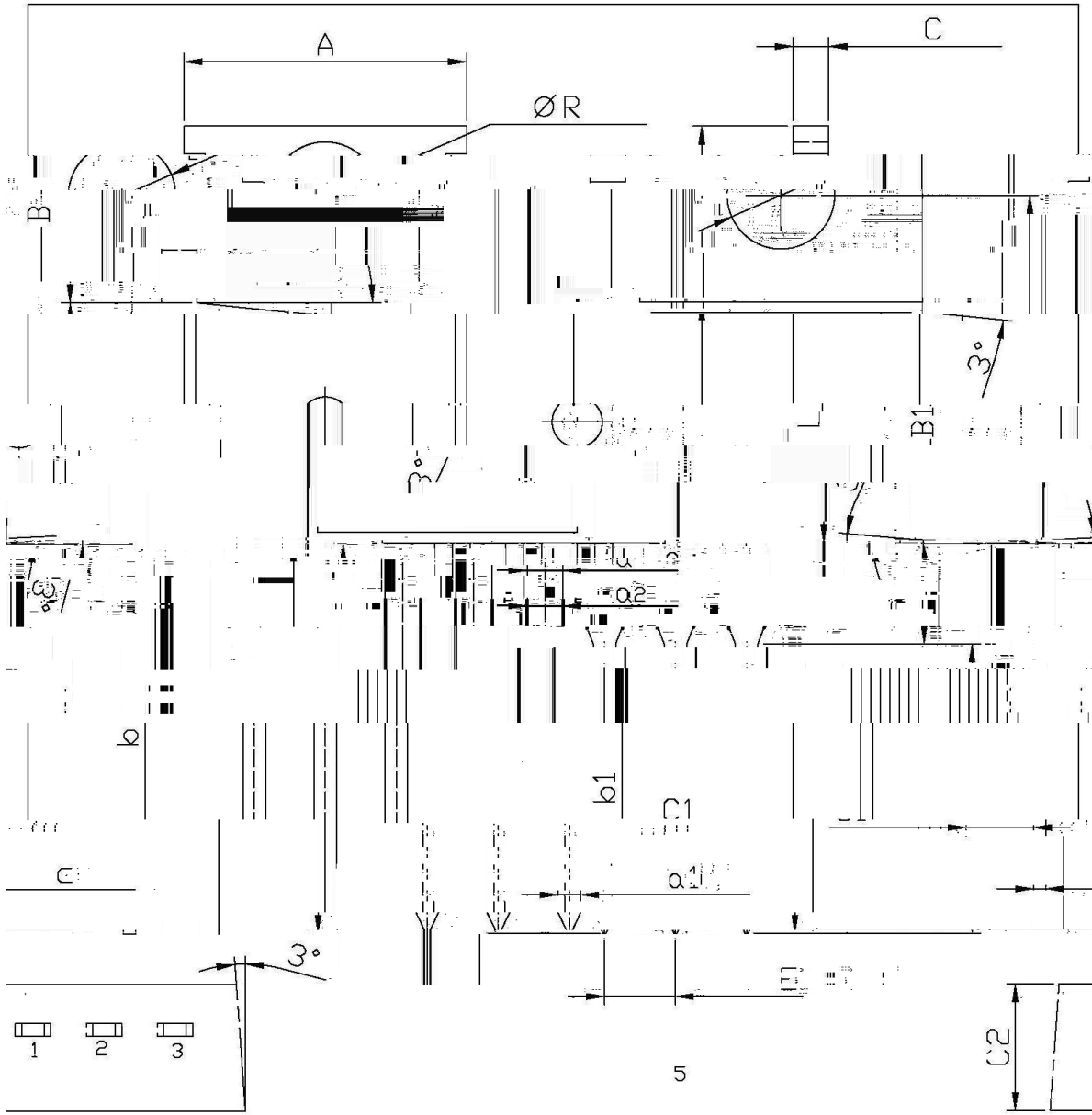
/ Electrical Characteristic Curve



/ Package Dimensions

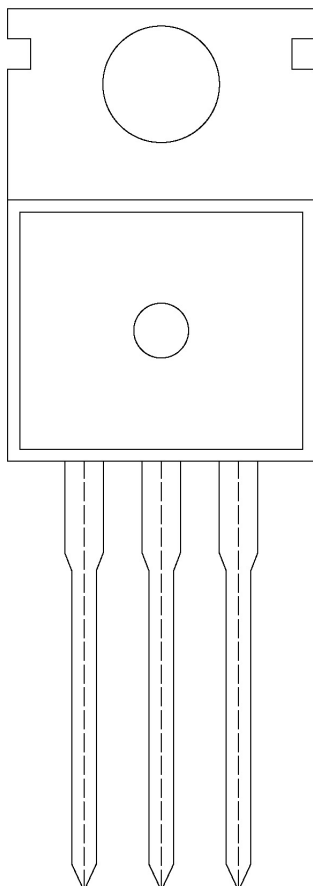
T0-220

单位: mm

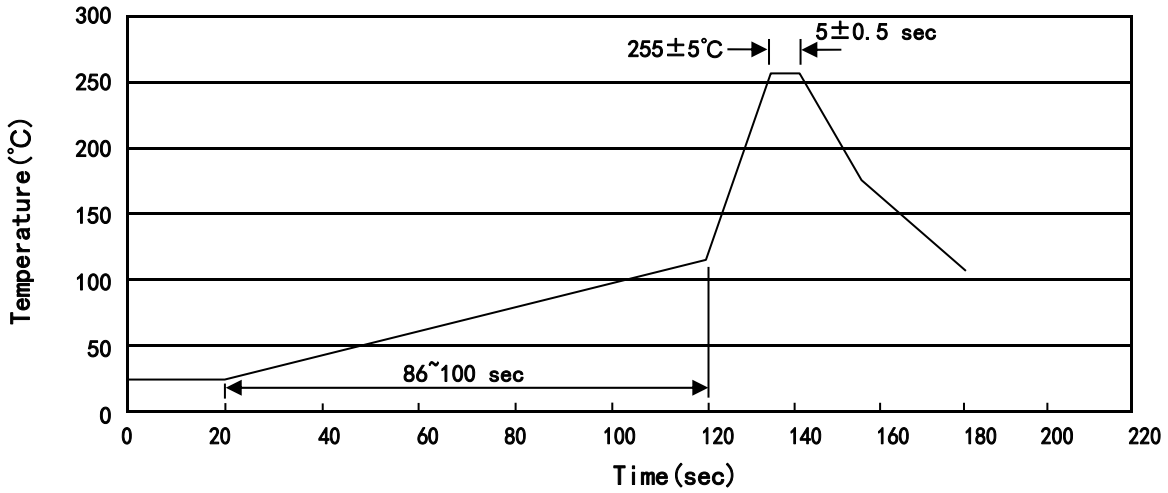


Dimensions In Millimeters			Dimensions In Millimeters		
Max	Symbol	Min	Max	Symbol	Min
1.4	A	9.8	10.2	C	11.2
6.7	R	3.56	3.64	B	6.3
9.4	B	15.7	16.1	B1	9.0
2.6	b	12.6	13.6	c1	2.2

/ Marking Instructions



() / 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°C Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-220/F	200	10	2,000	5	10,000	135x190	237x172x102	560x245x195

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-220/F	50	20	1,000	5	5,000	532x31.4x5.5	555x164x50	575x290x180

/ Notices

PCB