

/ Descriptions

TO-220

Voltage Regulator in a TO-220 Plastic Package.

/ Features

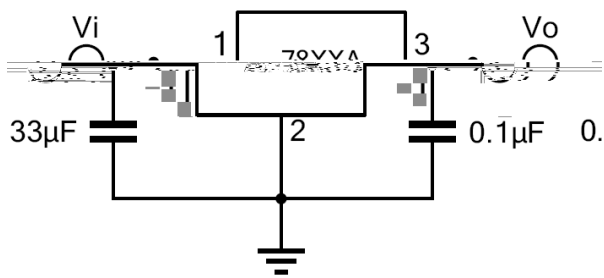
1.0A,

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

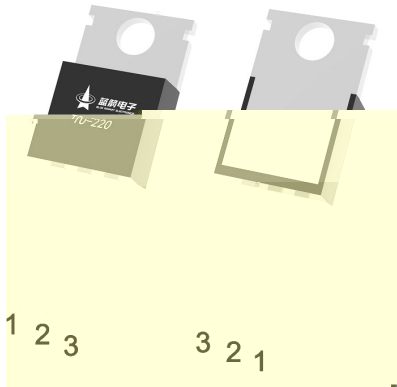
/ Applications

Voltage Regulator.

/ / Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN

PIN 2 GND

PIN 3 OUT

/ Marking

See Marking Instructions.

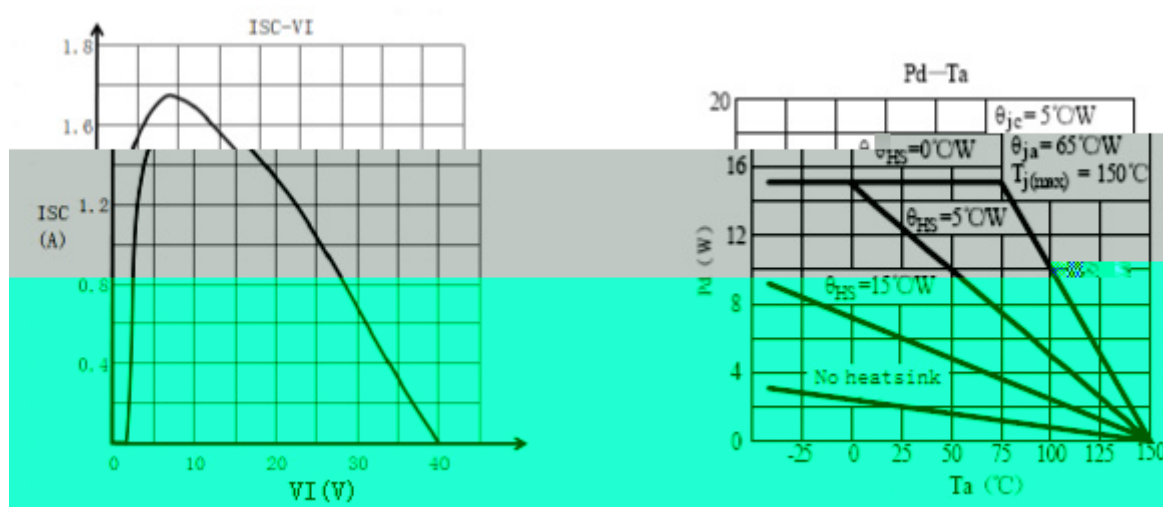
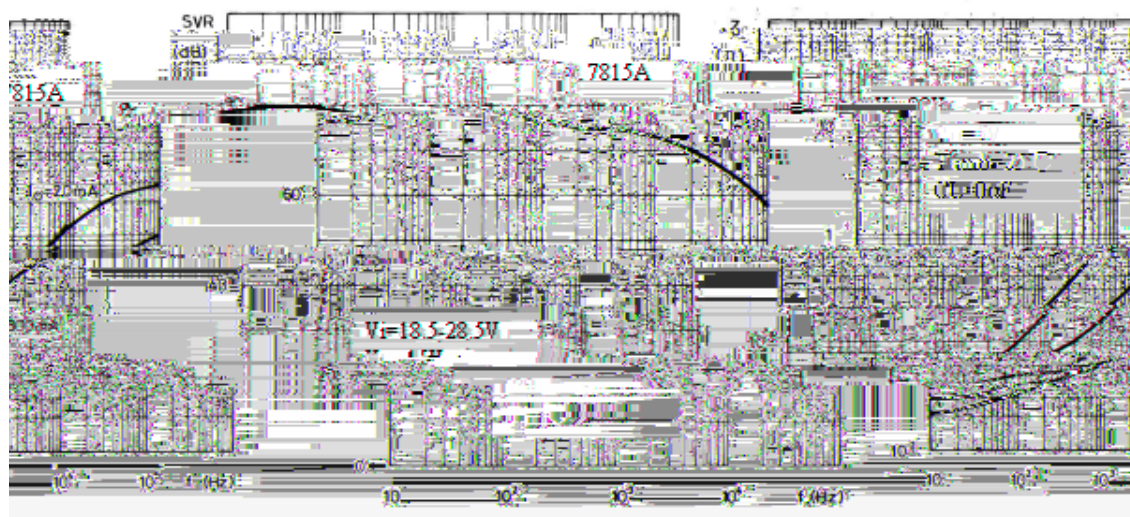
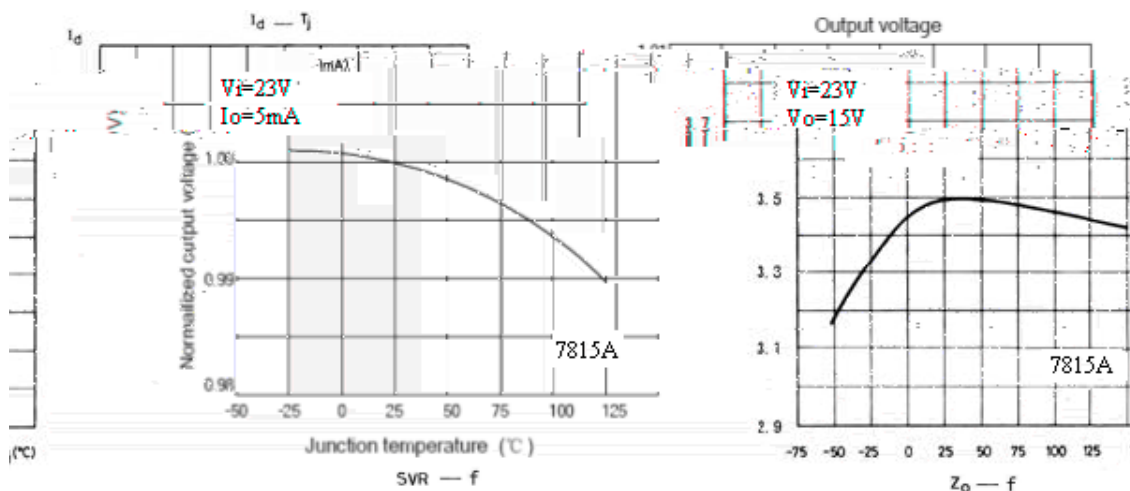
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Input voltage	V_i	17.5~35	V
Power Dissipation	P_D	Internally Limited	W
Thermal Resistance Junction-ambient	$R_{\theta JA}$	65	/W
Thermal Resistance Junction-case	$R_{\theta JC}$	5.0	/W
Operating Temperature Range	T_{OPR}	-40 ~ 125	
Storage temperature range	T_{stg}	-65 ~ 150	

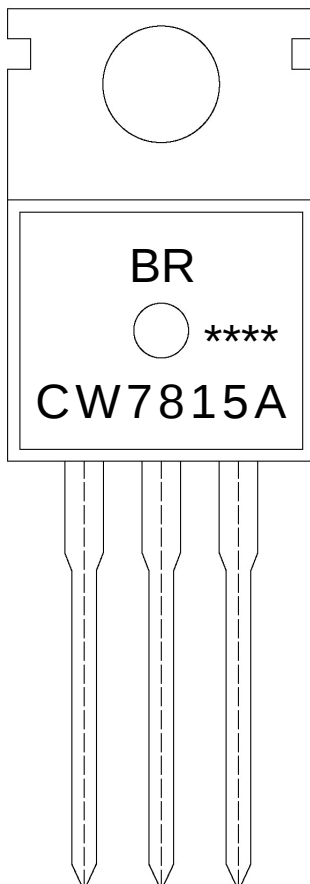
/ Electrical Characteristics($V_i=23\text{V}, I_o=500\text{mA}, T_j=-30^\circ\text{C} \sim 125^\circ\text{C}$,unless otherwise specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_j=25^\circ\text{C}$	14.4	15	15.6	V
		$V_i=17.5\text{V}\sim 30\text{V}$ $I_o=5\text{mA}\sim 1.0\text{A}$ $P_D\leq 15\text{W}$	14.25	15	15.75	V
Load Regulation	V_{Load}	$T_j=25^\circ\text{C}$ $I_o=5\text{mA}\sim 1.0\text{A}$			250	mV
		$T_j=25^\circ\text{C}$ $I_o=250\text{mA}\sim 750\text{mA}$			125	mV
Line Regulation	V_{Line}	$T_j=25^\circ\text{C}$ $V_i=17.5\text{V}\sim 30\text{V}$			250	mV
		$T_j=25^\circ\text{C}$ $V_i=20\text{V}\sim 26\text{V}$			125	mV
Quiescent Current	I_q	$T_j=25^\circ\text{C}$			8.0	mA
Quiescent Current Change	I_q	$V_i=17.5\text{V}\sim 30\text{V}$			1.0	mA
		$I_o=5\text{mA}\sim 1.0\text{A}$			0.5	mA
Output Voltage Drift	V_o/ T	$I_o=5\text{mA}$ $T_j=0\sim 125^\circ\text{C}$		-1.0		mV/
Output Noise Voltage	eN	B=10Hz~100KHz $T_j=25^\circ\text{C}$		10		$\mu\text{V}/V_o$
Supply Voltage Rejection	SVR	$V_i=18.5\text{V}\sim 28.5\text{V}$ $f=120\text{Hz}$	54			dB
Dropout Voltage	V_d	$I_o=1.0\text{A}$ $T_j=25^\circ\text{C}$		2.0		V
Output Resistance	R_o	$f=1\text{KHz}$		19		$\text{m}\Omega$
Short Circuit Current	Isc	$V_i=35\text{V}$ $T_j=25^\circ\text{C}$		200		mA

/ Electrical Characteristic Curve



/ Marking Instructions



BR

CW7815A

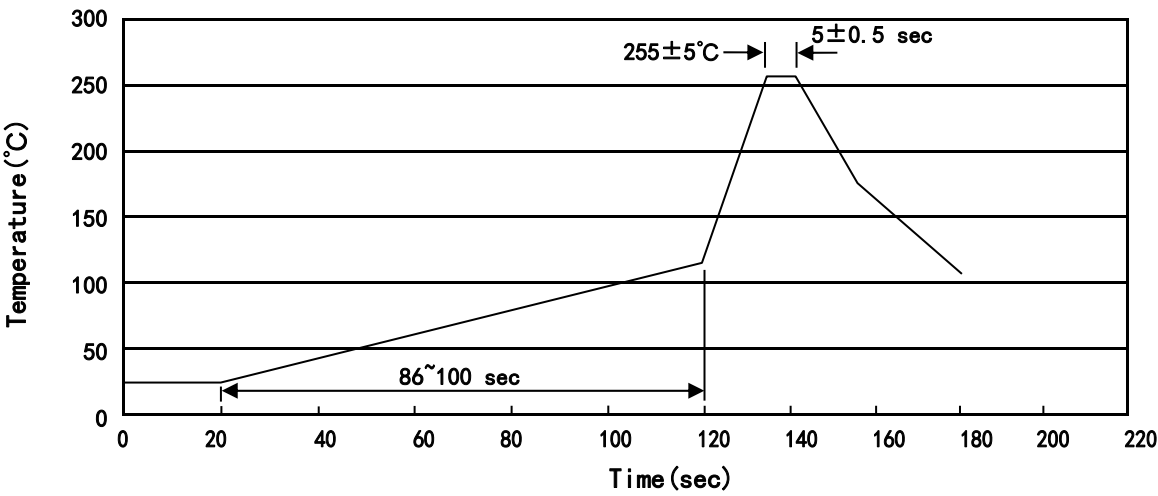
Note:

BR: Company Code

CW7815A: Product Type Code

****: 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 mm ³)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

7815A

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蓝箭电子
BLUE ROCKET ELECTRONICS

DATA SHEET

/ Notices

PCB