

/ Descriptions

TO-220

Voltage Regulator in a TO-220 Plastic Package.

/ Features

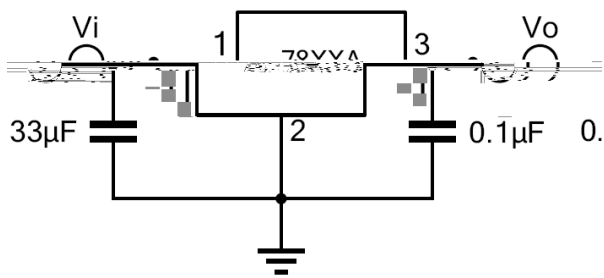
1.0A,

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

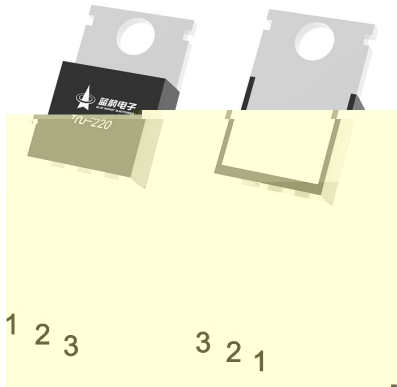
/ Applications

Voltage Regulator.

/ / Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN

PIN 2 GND

PIN 3 OUT

/ Marking

See Marking Instructions.

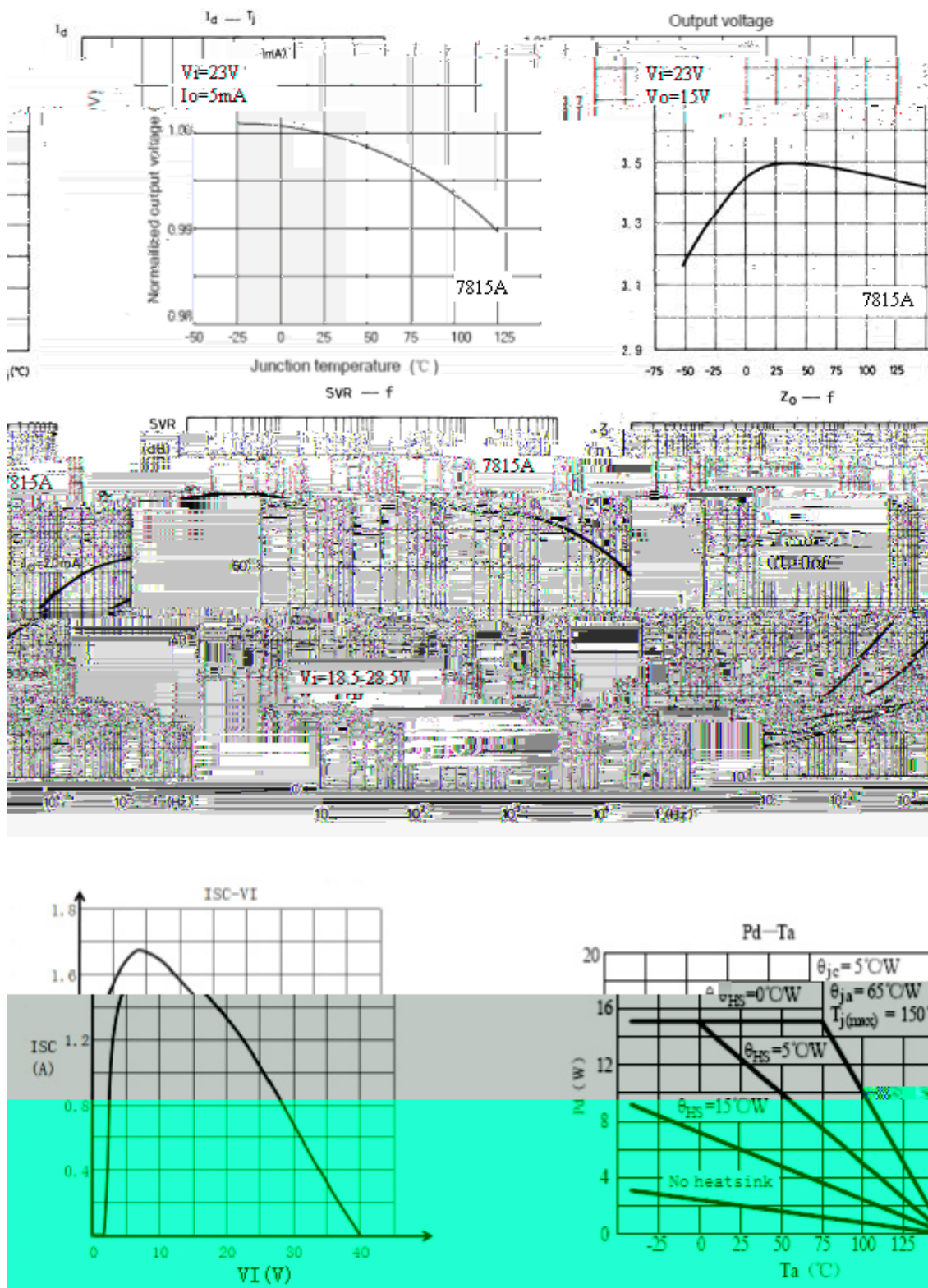
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

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($V_i=23V, I_o=500mA, T_j=-30^\circ\text{C} \sim 125^\circ\text{C}$,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
		$V_i=17.5V\sim 30V$ $I_o=5mA\sim 1.0A$ $P_D\leq 15W$	14.25	15	15.75	V
Load Regulation	V_{Load}	$T_j=25^\circ\text{C}$ $I_o=5mA\sim 1.0A$			250	mV
		$T_j=25^\circ\text{C}$ $I_o=250mA\sim 750mA$			125	mV
Line Regulation	V_{Line}	$T_j=25^\circ\text{C}$ $V_i=17.5V\sim 30V$			250	mV
		$T_j=25^\circ\text{C}$ $V_i=20V\sim 26V$			125	mV
Quiescent Current	I_q	$T_j=25^\circ\text{C}$			8.0	mA
Quiescent Current Change	I_q	$V_i=17.5V\sim 30V$			1.0	mA
		$I_o=5mA\sim 1.0A$			0.5	mA
Output Voltage Drift	V_o/ T	$I_o=5mA$ $T_j=0\sim 125^\circ\text{C}$		-1.0		mV/
Output Noise Voltage	eN	B=10Hz~100KHz $T_j=25^\circ\text{C}$		10		$\mu V/V_o$
Supply Voltage Rejection	SVR	$V_i=18.5V\sim 28.5V$ $f=120Hz$	54			dB
Dropout Voltage	V_d	$I_o=1.0A$ $T_j=25^\circ\text{C}$		2.0		V
Output Resistance	R_o	$f=1KHz$		19		$m\Omega$
Short Circuit Current	Isc	$V_i=35V$ $T_j=25^\circ\text{C}$		200		mA

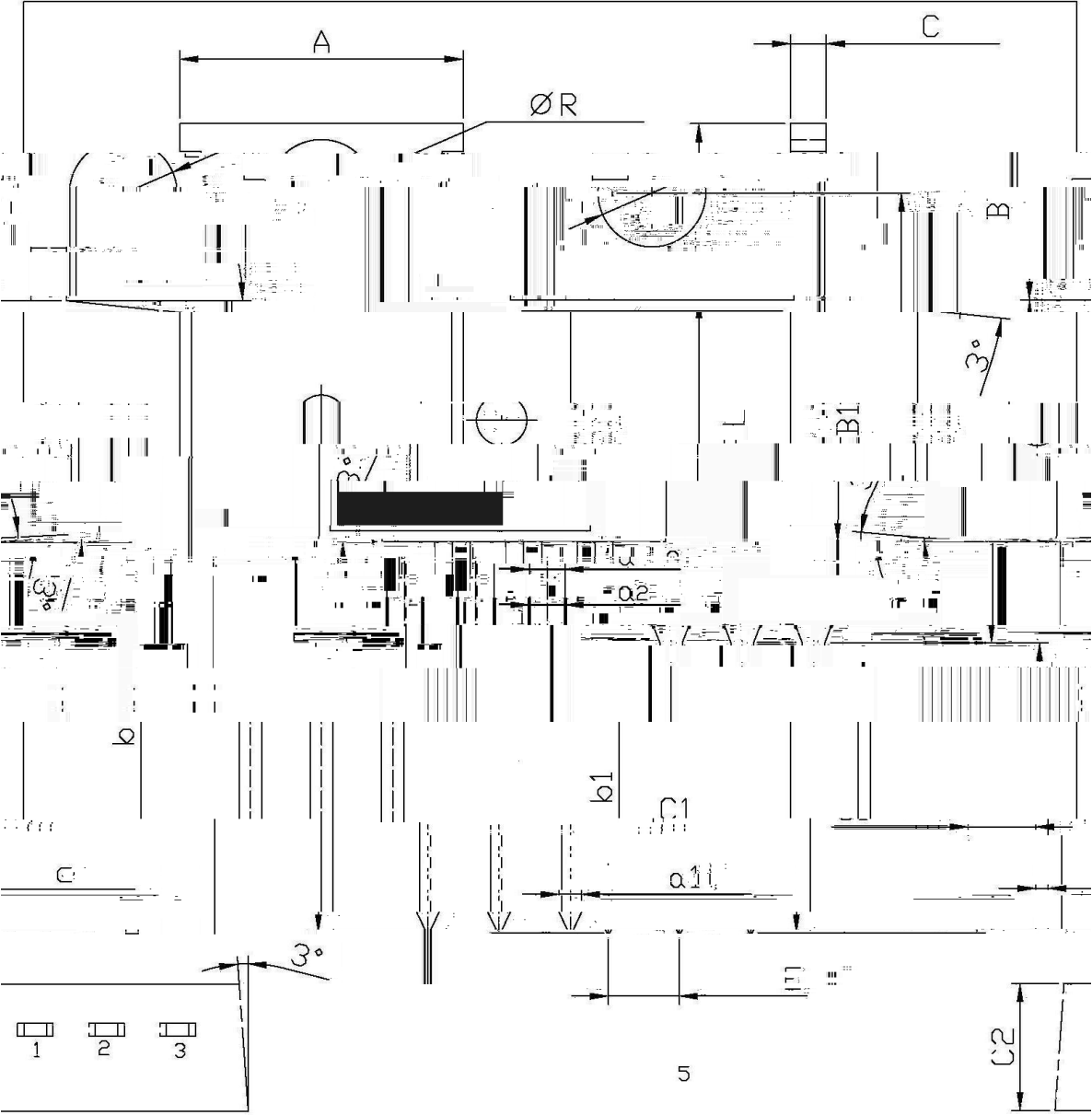
/ Electrical Characteristic Curve



/ Package Dimensions

TQ-220

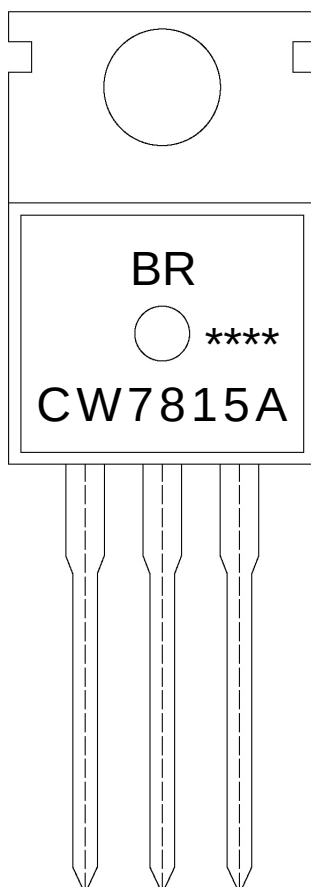
单位: mm



Dimensions In Millimeters				Dimensions In Millimeters			
Symbol		Min	Max	Symbol		Min	Max
A		9.8	10.2	C		1.2	1.4
R		3.56	3.64	B		6.3	6.7
L		15.7	16.1	B1		9.0	9.4
b		12.6	13.6	C1		2.2	2.6



/ Marking Instructions



BR

CW7815A

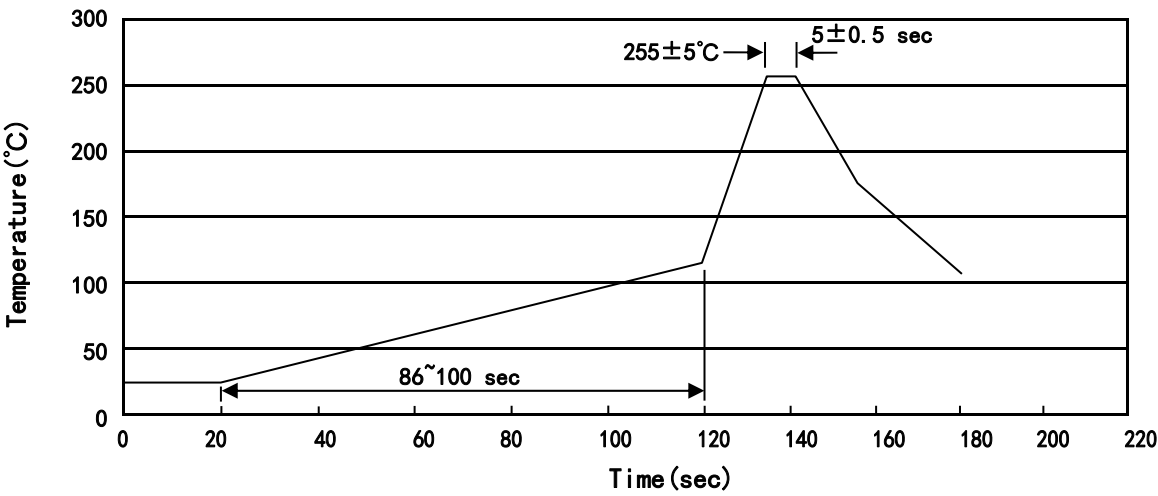
Note:

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