

/ Descriptions

TO-252
Voltage Regulator in a TO-252 Plastic Package.

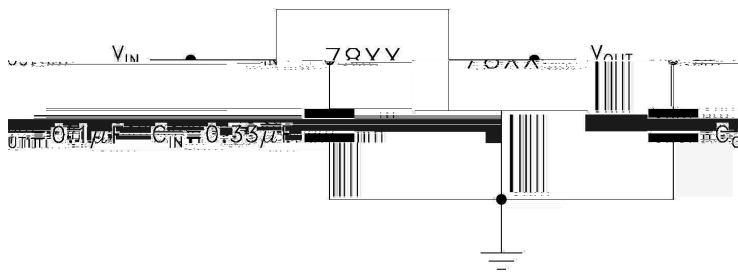
/ Features

1.5A,
3-Terminal regulators ,output current up to 1.5 A, internal thermal overload protection and short-circuit limiting, HF Product.

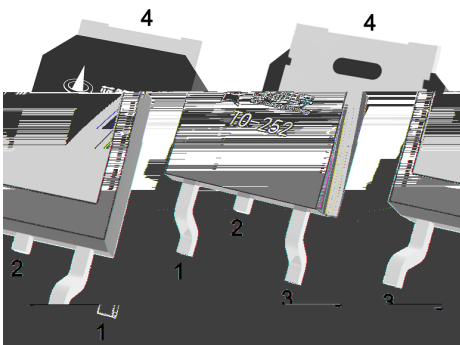
/ Applications

Voltage Regulator.

/ Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN PIN 2 4 GND PIN 3 OUT

/ Marking

See Marking Instructions.

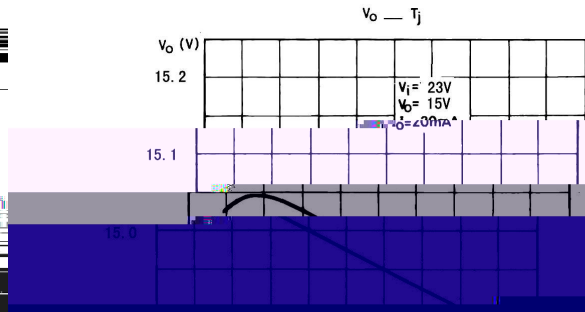
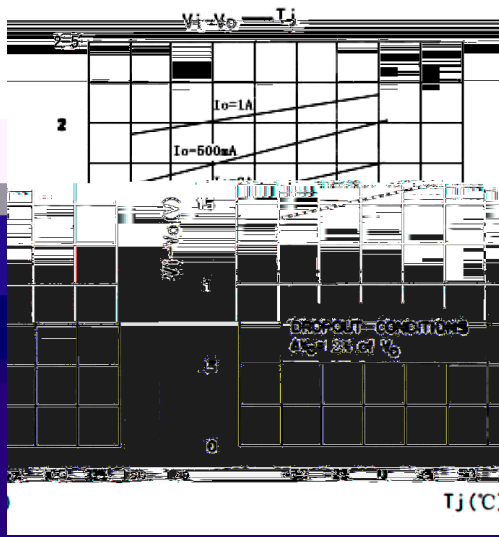
/ Absolute Maximum Ratings($T_a=25$)

Parameter	Symbol	Rating	Unit
Input Voltage Difference	V_I	35	V
Power Dissipation	P_D	Internally Limited	W
Junction-to-Ambient	R_{JA}	105	$^{\circ}C/W$
Junction-to-Case	R_{JC}	10	$^{\circ}C/W$
Operating Temperature Range	T_{OPR}	-40~125	$^{\circ}C$
Storage temperature range	T_{stg}	-65~150	$^{\circ}C$

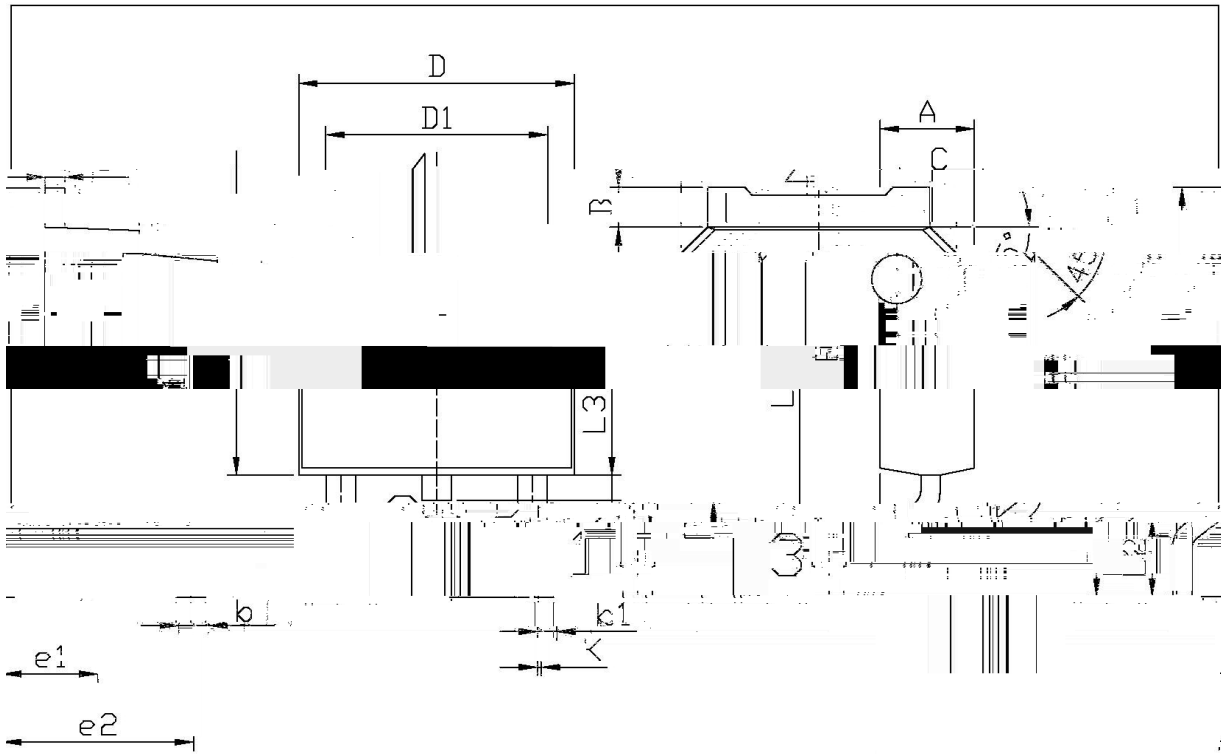
/ Electrical Characteristics($T_a=25$ $V_i=23V, I_o=500mA$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_j=25$	14.4	15	15.6	V
		$V_i=17.5V-30V$ $I_o=5.0mA-1.0A$ P_o 15W	14.25	15	15.75	
Load Regulation	ΔV_{Load}	$T_j=25^{\circ}C$ $I_o=5.0mA-1.5A$			300	mV
		$T_j=25^{\circ}C$ $I_o=250mA-750mA$			150	
Line Regulation	ΔV_{Line}	$T_j=25^{\circ}C$ $V_i=17.5V-30V$			300	mV
		$T_j=25$ $V_i=20V-26V$			150	
Quiescent Current	I_q	$T_j=25^{\circ}C$			8.0	mA
Quiescent Current Change	ΔI_q	$V_i=17.5V-30V$			1.0	mA
		$I_o=5.0mA-1.0A$			0.5	mA
Output Voltage Drift	$\Delta V_o/\Delta T$	$I_o=5.0mA$		-1.0		mV/ $^{\circ}C$
Output Noise Voltage	eN	B=10Hz-100KHz $T_j=25^{\circ}C$		90		$\mu V/V_o$
Supply Voltage Rejection	SVR	$V_i=18.5V-28.5V$ $f=120Hz$	54			dB
Dropout Voltage	V_d	$I_o=1A$ $T_j=25^{\circ}C$		2.0		V
Output Resistance	R_o	$f=1.0KHz$		19		m
Short Circuit Current	Isc	$V_i=35V$ $T_j=25^{\circ}C$		0.23		A
Short Circuit Peak Current	Iscp	$T_j=25^{\circ}C$		2.2		A

/ Electrical Characteristic Curve



/ Package Dimensions



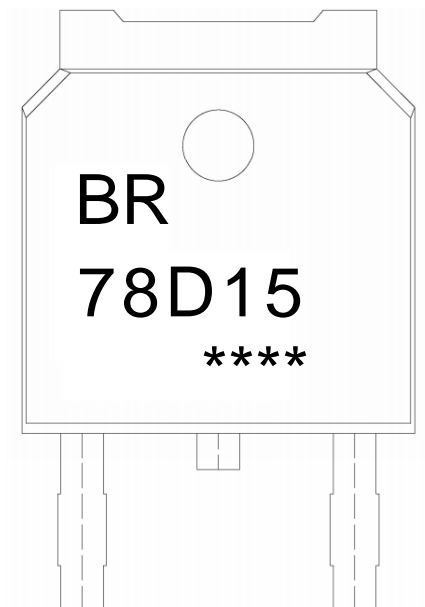
单位: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	2.20	2.40	B	0.95	1.25
B	0.95	1.25	e1	2.27	2.54
C	0.70	0.90	e2	1.27	1.52
L3	9.85	10.35	b1	0.45	0.55
J2	1.70	2.00	J1	6.45	6.75
J3	0.76	0.90	J4	5.30	5.80
J5	0.60	0.80			

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TO-25

/ Marking Instructions



BR

78D15

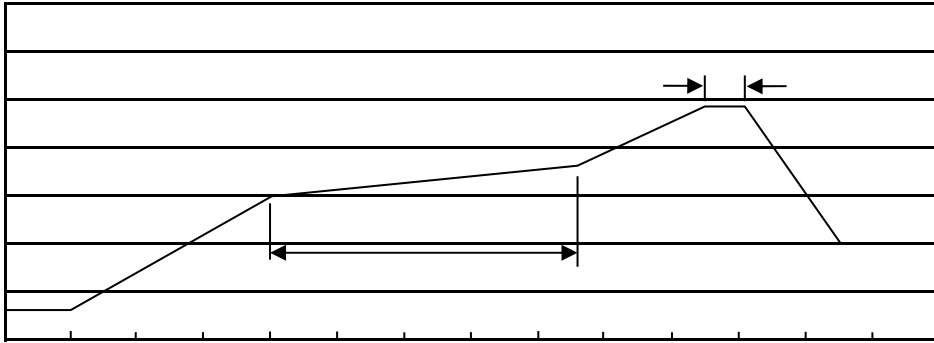
Note:

BR: Company Code

78D15: Product Type

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

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-----------|----------|-----------------------------------------|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245±5 | | 5±0.5sec; | | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 | | | 2 | 10 /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
TO-252	2,500	2	5,000	6	30,000	13" x16	360x360x50	380x335x366

/ 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-251/252	75	48	3,600	5	18,000	526x20.5x5.25	555x164x50	575x290x180

/ Notices

PCB