

/ Descriptions

TO-252

Voltage Regulator in a TO-252 Plastic Package.

/ Features

1.5A,

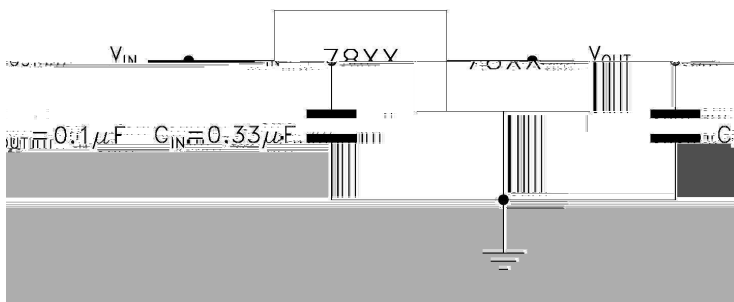
AEC-Q100

3-Terminal regulators ,output current up to 1.5 A, internal thermal overload protection and short-circuit limiting, Qualified to AEC-Q100 Standards for High Reliability, HF Product.

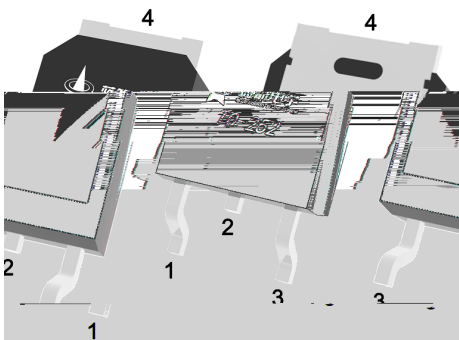
/ Applications

Voltage Regulator, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN PIN 2 4 GND PIN 3 OUT

/ Marking

See Marking Instructions.

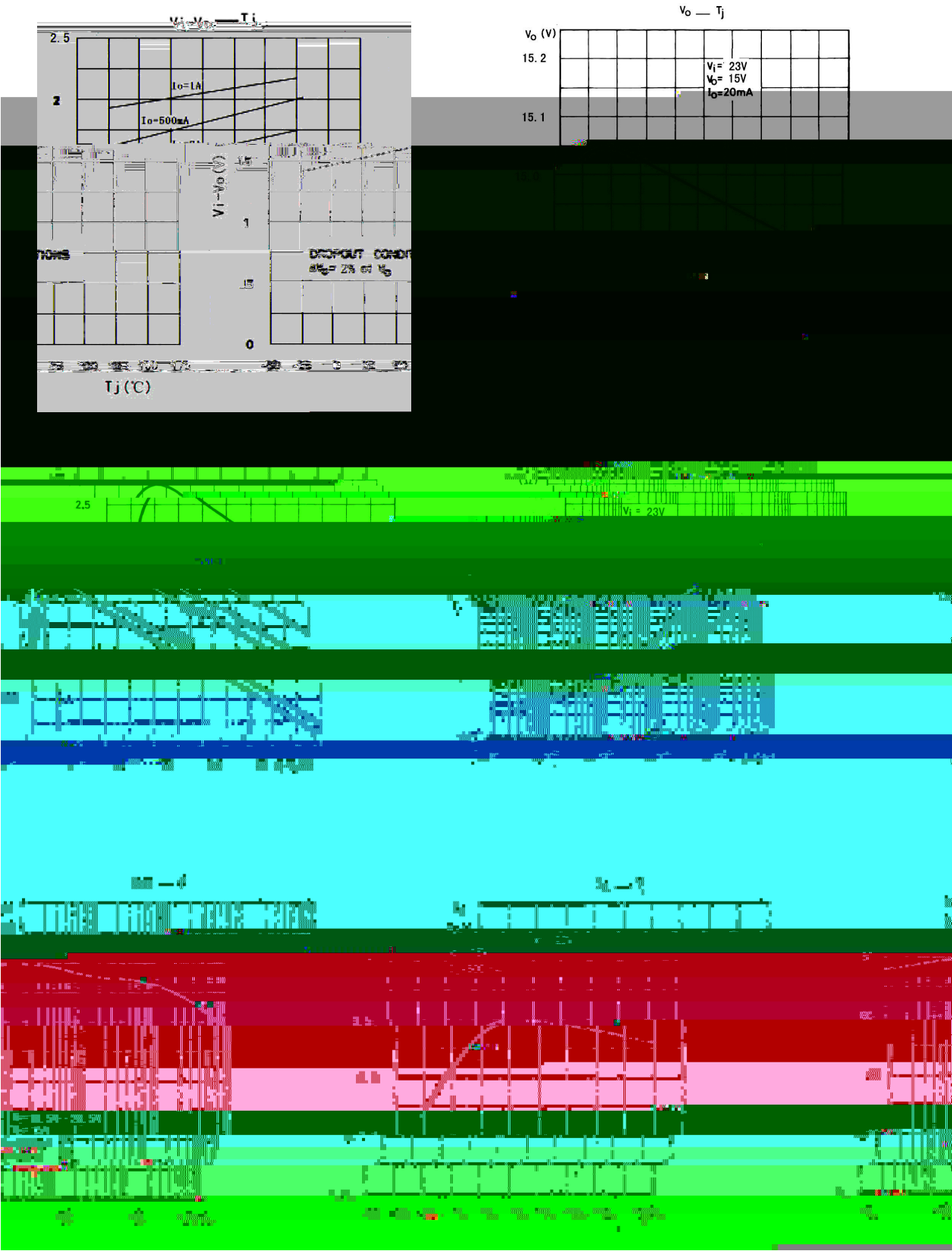
/ Absolute Maximum Ratings($T_a=25$)

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

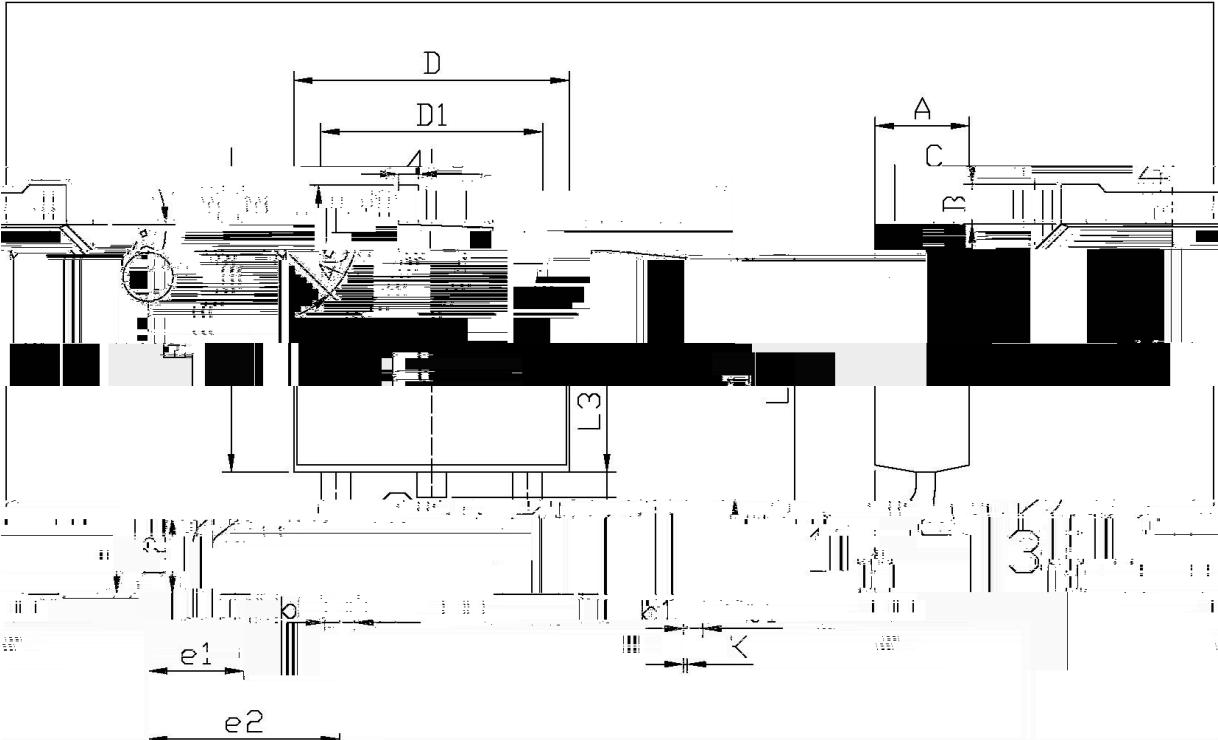
/ Electrical Characteristics($T_a=25$ $V_i=23V, I_o=500mA$ unless otherwise specified)

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

/ Electrical Characteristic Curve



/ Package Dimensions

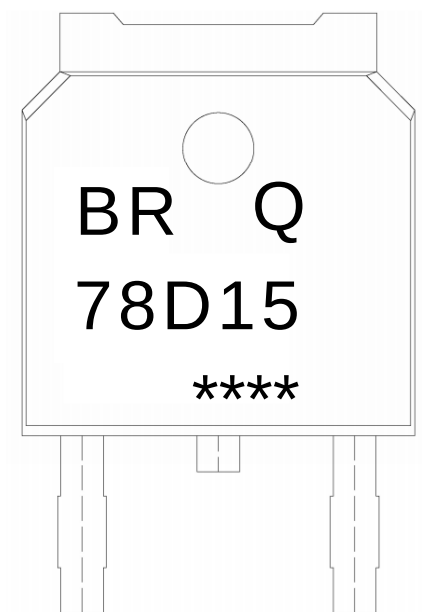


单位: mm

Symbol		Dimensions In Millimeters		Symbol		Dimensions In Millimeters	
		Min	Max			Min	Max
95	6.25			20	2.40	2.40	2.60
e1	2.24	2.34		B	0.95	1.25	
3	4.42	4.30	4.54	51	0.70	0.90	0.70
L1	9.85	10.35			0.45	0.55	
		0.55		L2	1.70	2.00	
60	10.90			645	6.75		L3
0.00	0.10			D1	5.10	5.50	K

T0-252

/ Marking Instructions



BR

Q

78D15

Note:

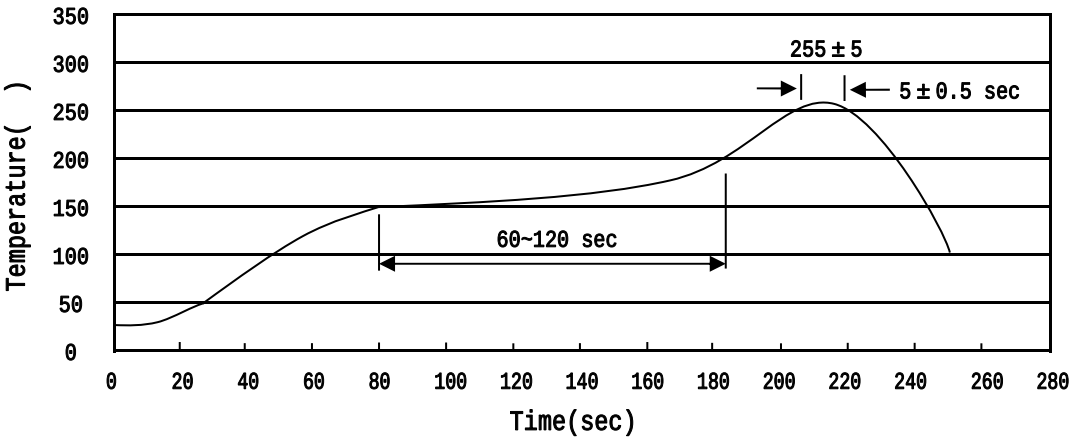
BR: Company Code

Q: Automobile halogen-free product Code

78D15: Product Type

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

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Note:

- 1

150 200

60 120sec;

1.Preheating:150~200 , Time:60~120sec.
- 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

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 ×16	360×360×50	380×335×366

/ 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	526×20.5×5.25	555×164×50	575×290×180

/ Notices

PCB