

/ Descriptions

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

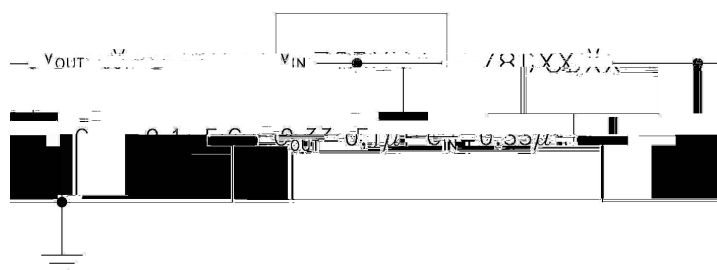
/ Features

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

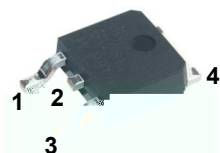
/ Applications

Voltage Regulator.

/ / Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN PIN 2 4 GND PIN 3 OUT

/ Marking

See Marking Instructions.

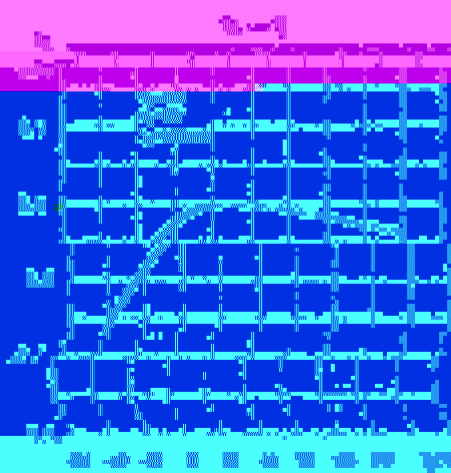
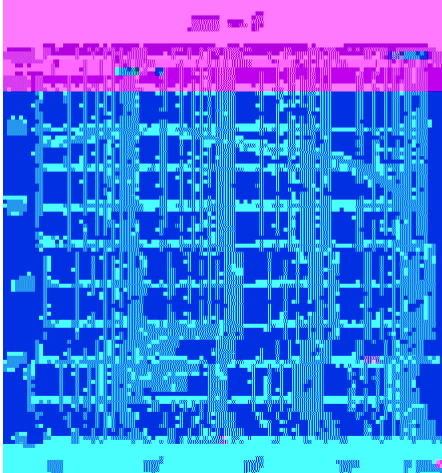
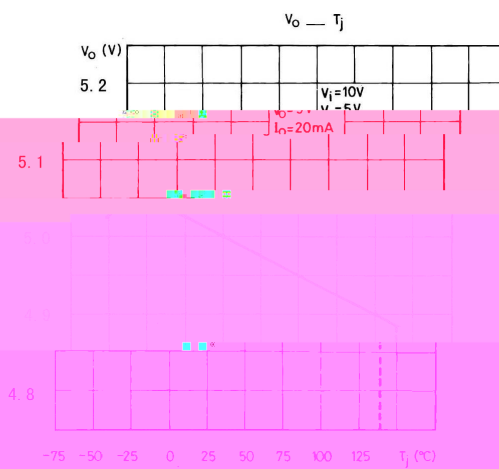
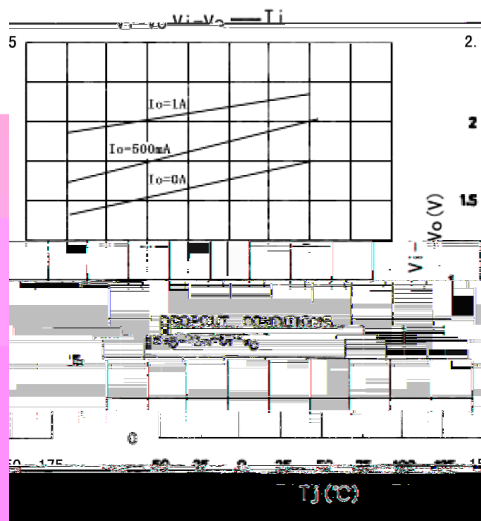
/ Absolute Maximum Ratings($T_a=25$)

Parameter	Symbol	Rating	Unit
Input voltage	V_i	35	V
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	65	/W
Thermal Resistance Junction-Case	$R_{\theta JC}$	5.0	/W
Operating Junction Temperature Range	T_{OPR}	0 125	
Storage temperature range	T_{stg}	-65 150	

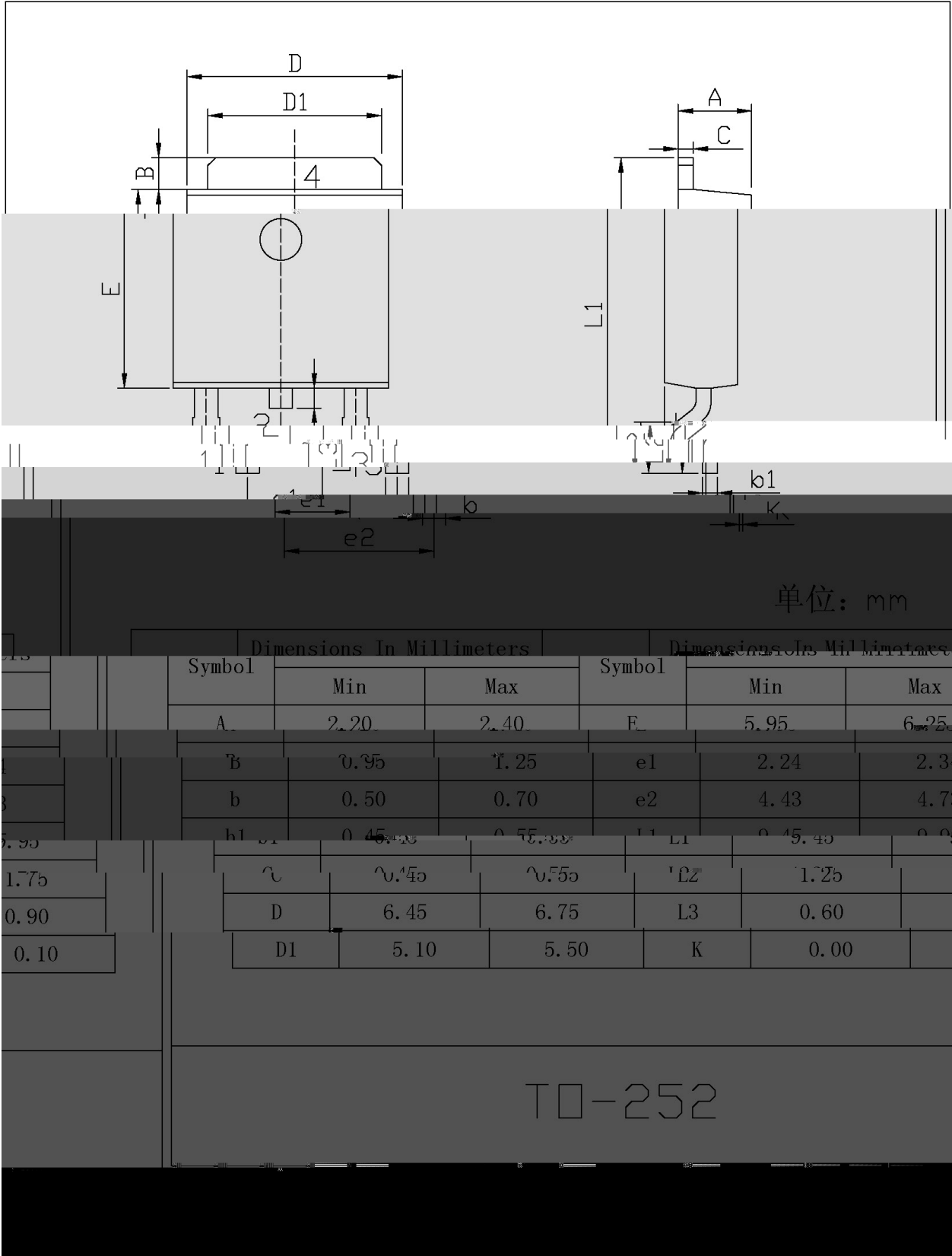
/ Electrical Characteristics($T_a=25$ $V_i=15V, I_o=500mA$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_o	$T_j=25$	8.65	9.0	9.35	V
		$V_i=11.5V-26V$ $I_o=5mA-1A$, $P_o \leq 15W$	8.55	9.0	9.45	V
Load Regulation	V_o	$T_j=25$ $I_o=5.0mA-1.5A$			180	mV
		$T_j=25$ $I_o=250mA-750mA$			90	mV
Line regulation	V_o	$T_j=25$ $V_i=11.5V-26V$			180	mV
		$T_j=25$ $V_i=12V-18V$			90	mV
Quiescent Current	I_q	$T_j=25$			8.0	mA
Quiescent Current Change	I_q	$V_i=11.5V-26V$			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 $T_j=25$		70		$\mu V/V_o$
Supply Voltage Rejection	SVR	$V_i=12V-23V$ $f=120Hz$	55			dB
Dropout Voltage	V_d	$I_o=1A$ $T_j=25$		2.0		V
Output Resistance	R_o	$f=1KHz$		17		m Ω
Short Circuit Current	I_{sc}	$V_i=35V$ $T_j=25$		0.40		A
Short Circuit Peak Current	I_{scp}	$T_j=25$		2.2		A

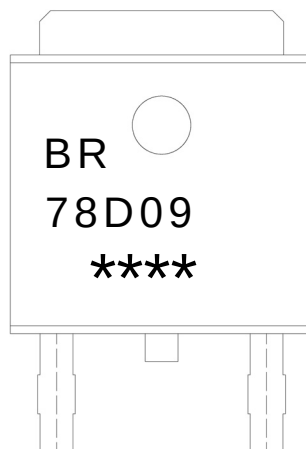
/ Electrical Characteristic Curve



/ Package Dimensions



/ **Marking Instructions**



BR

78D09

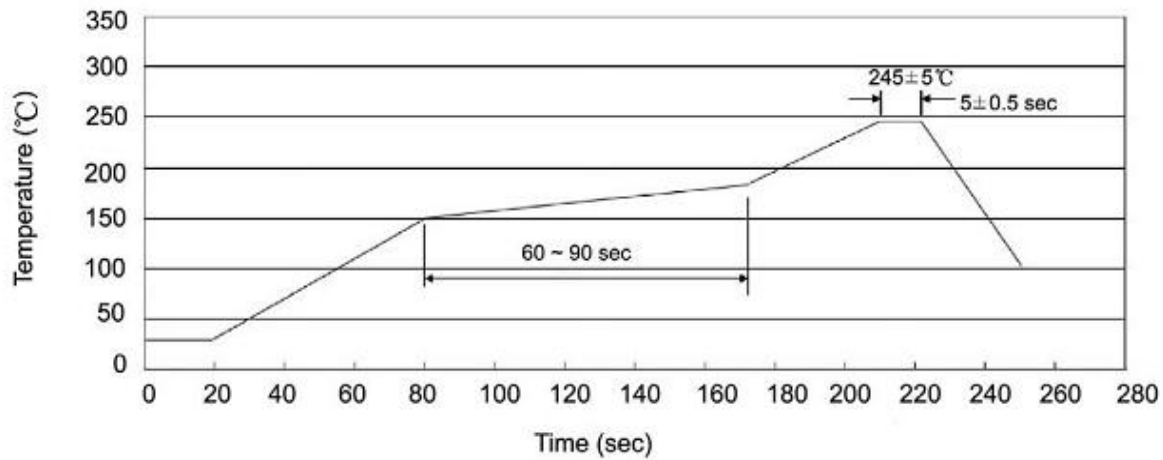
Note:

BR: Company Code.

78D09: 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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-252	2,500	2	5,000	6	30,000	13 ×16	360×360×50	380×335×366

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	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-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices