

/ Descriptions

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

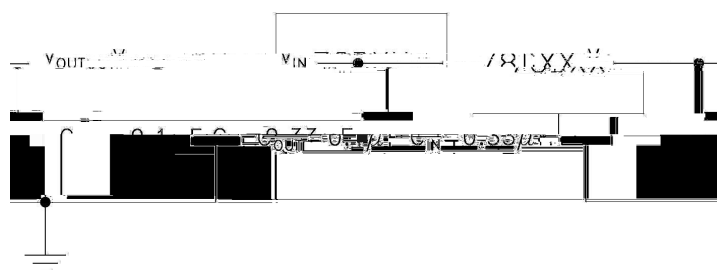
/ Features

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

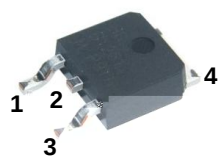
/ Applications

Voltage Regulator.

/ / Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN PIN 2 4 GND PIN 3 OUT

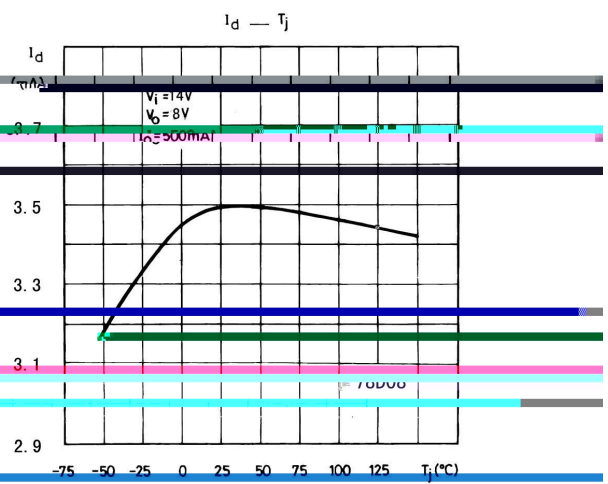
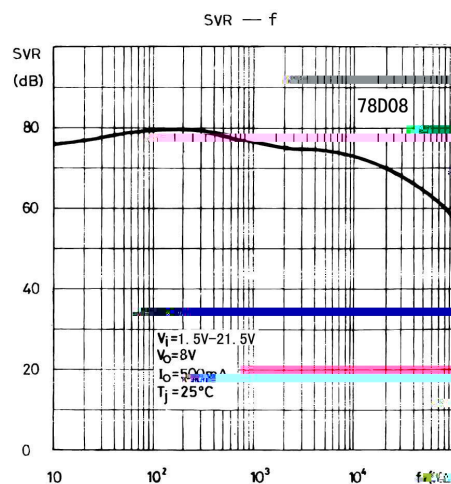
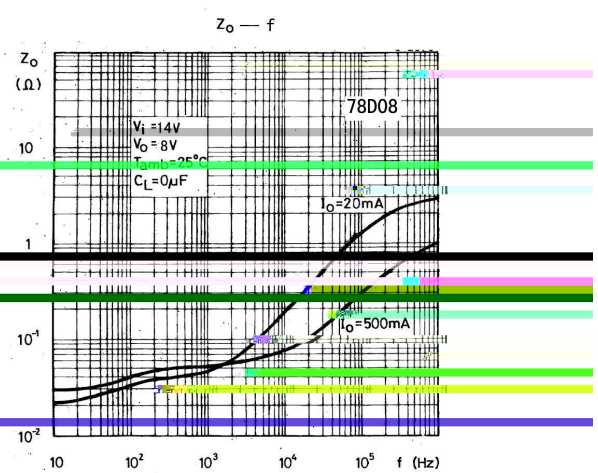
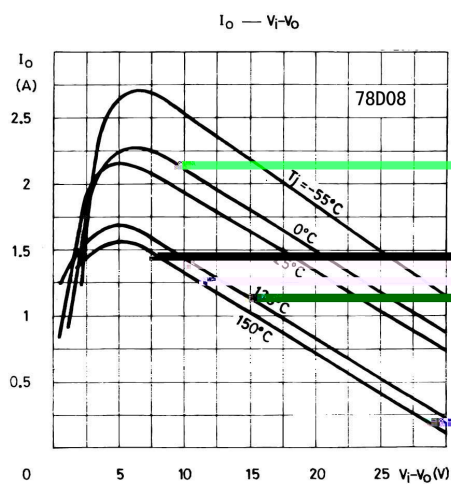
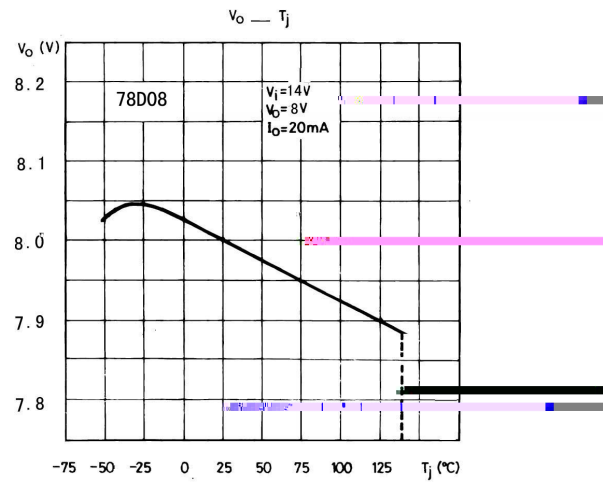
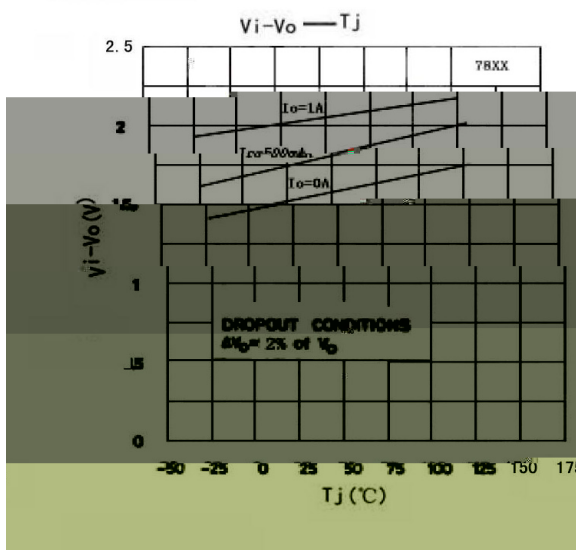
/ Marking

See Marking Instructions.

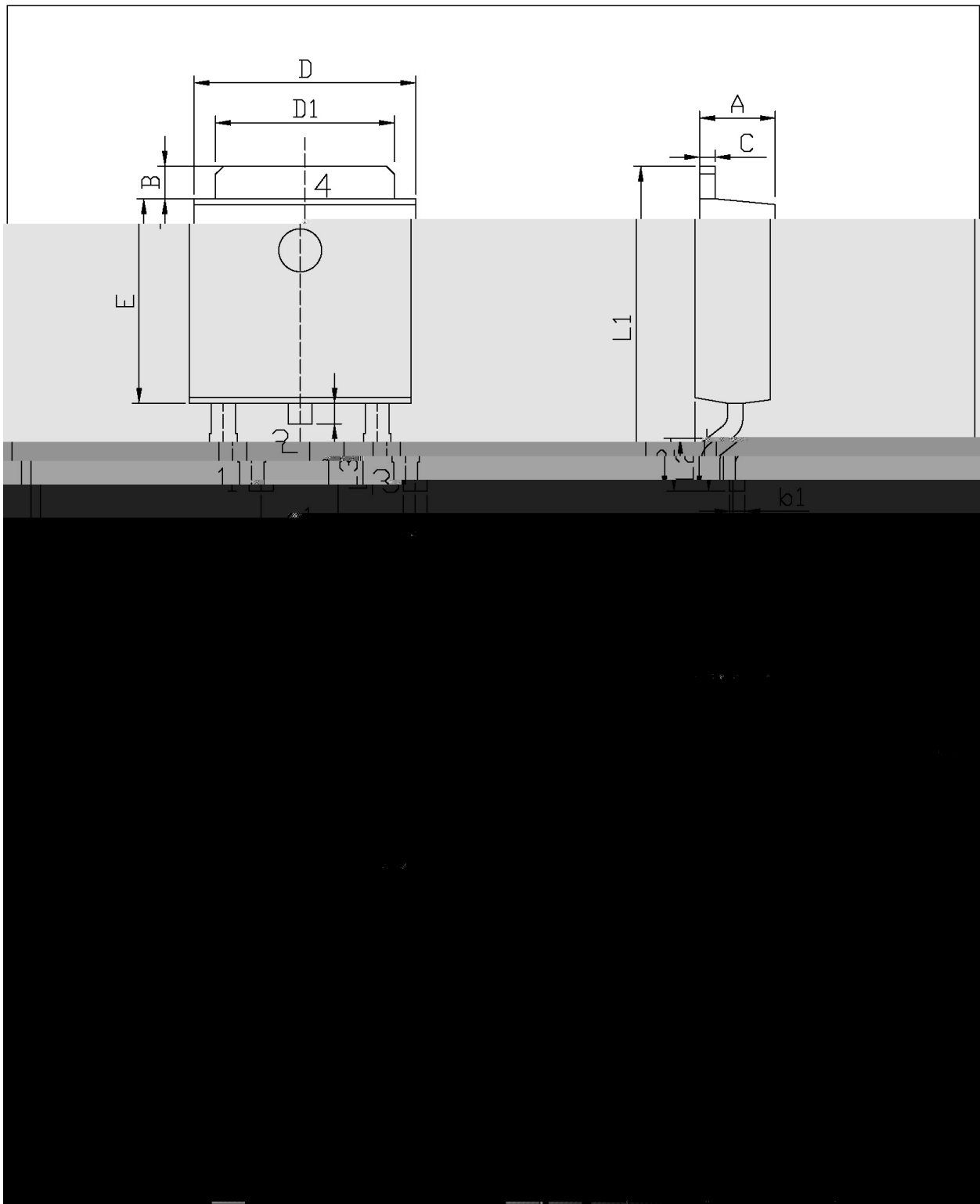
Parameter	Symbol	Rating	Unit
Input voltage	V_I	35	V
Thermal Resistance Junction-ambient	$R_{\theta JA}$	65	/W
Thermal Resistance Junction-case	$R_{\theta JC}$	5.0	/W
Operating Junction Temperature Range	T_{OPR}	0 125	
Storage temperature range	T_{stg}	-65 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_O	$T_j=25$	7.7	8.0	8.3	V
		$V_i=10.5V-25V$ $I_o=5mA-1A$ $P_o \leq 15W$	7.6	8.0	8.4	V
Load Regulation	V_o	$T_j=25$ $I_o=5.0mA-1.5A$			160	mV
		$T_j=25$ $I_o=250mA-750mA$			80	mV
Line regulation	V_o	$T_j=25$ $V_i=10.5V-25V$			160	mV
		$T_j=25$ $V_i=11V-17V$			80	mV
Quiescent Current	I_q	$T_j=25$			8.0	mA
Quiescent Current Change	I_q	$V_i=10.5V-25V$			1.0	mA
		$I_o=5mA-1A$			0.5	mA
Output Voltage Drift	V_o / T	$I_o=5mA$		-0.8		mV/
Output Noise Voltage	eN	B=10Hz-100KHz $T_j=25$		52		$\mu V/V_o$
Supply Voltage Rejection	SVR	$V_i=11.5V-21.5V$ $f=120Hz$	56			dB
Dropout Voltage	V_d	$I_o=1A$ $T_j=25$		2.0		V
Output Resistance	R_o	$f=1KHz$		16		$m\Omega$
Short Circuit Current	I_{sc}	$V_i=35V$ $T_j=25$		0.45		A
Short Circuit Peak Current	I_{scp}	$T_j=25$		2.2		A

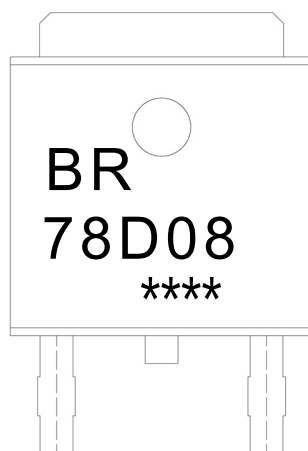
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

78D08

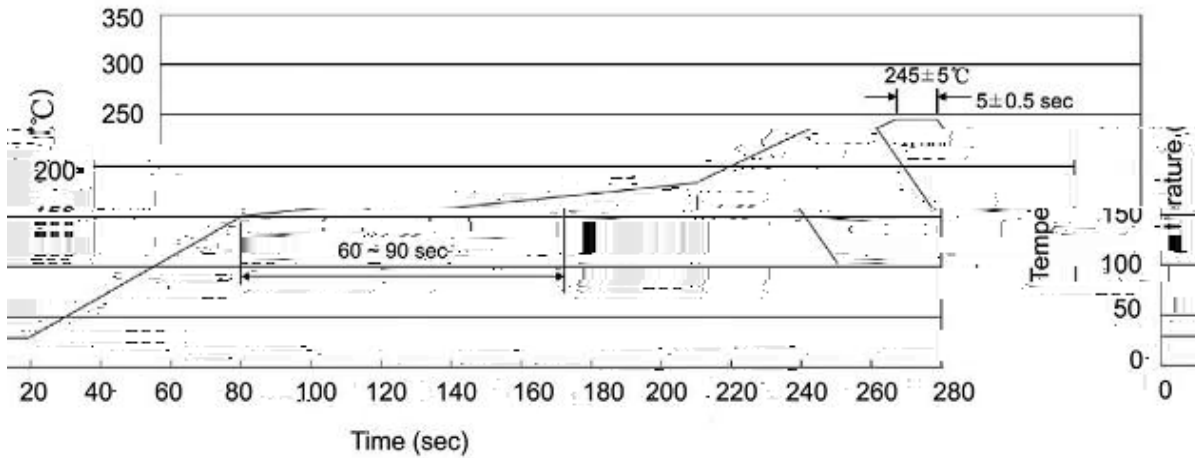
Note:

BR: Company Code.

78D08: 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 ×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