

/ Descriptions

TO-252

Voltage Regulator in a TO-252 Plastic Package.

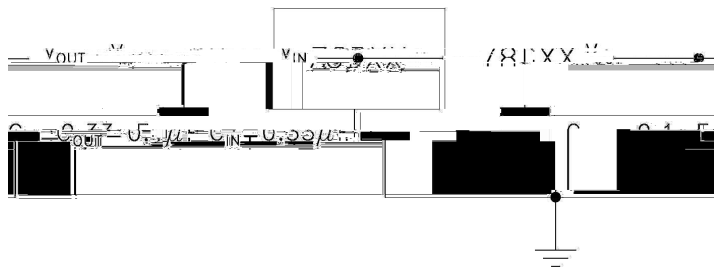
/ Features

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

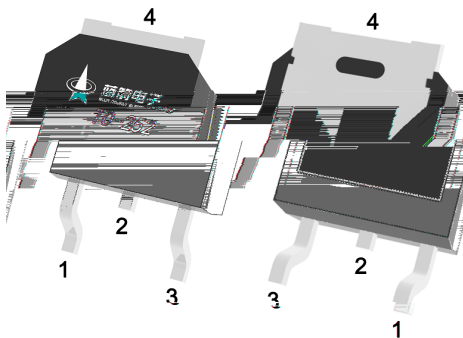
/ Applications

Voltage Regulator.

Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN

PIN 2 4 GND

PIN 3 OUT

/ Marking

See Marking Instructions.

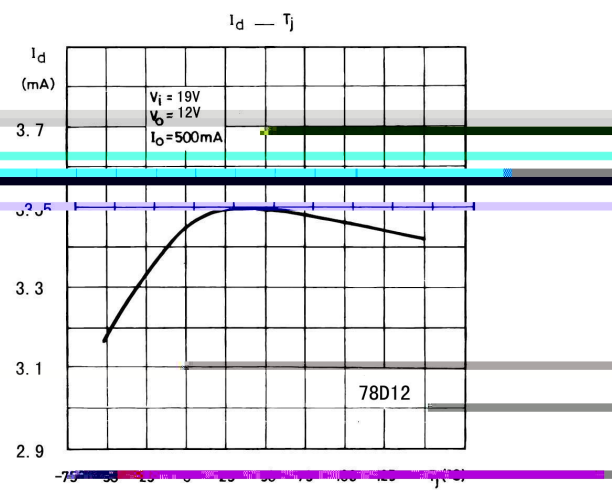
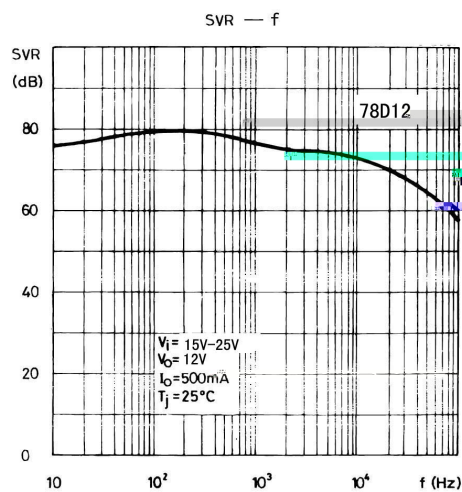
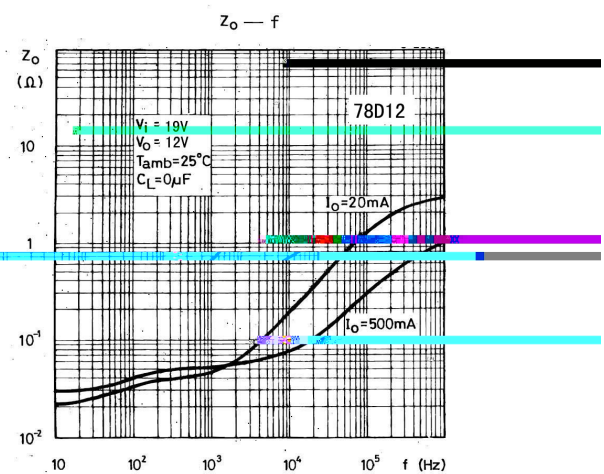
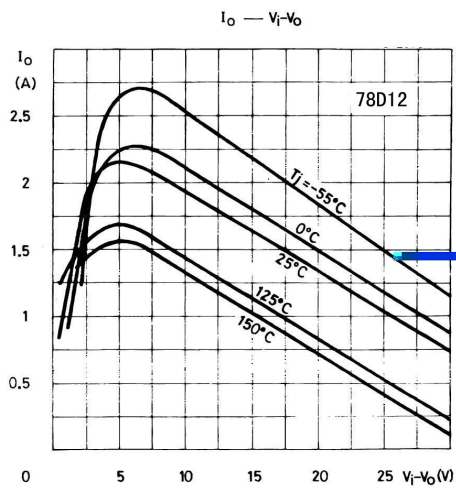
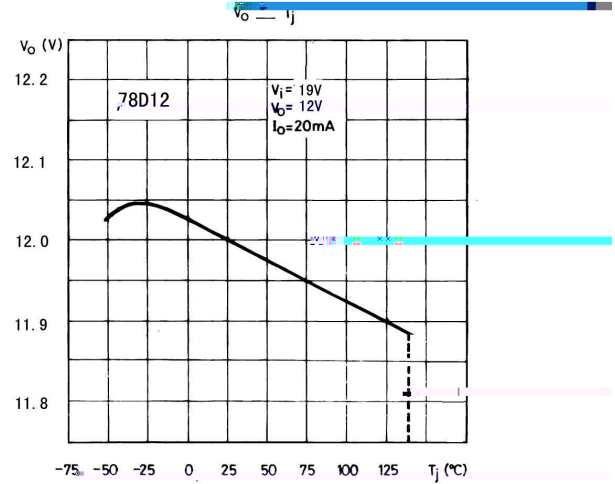
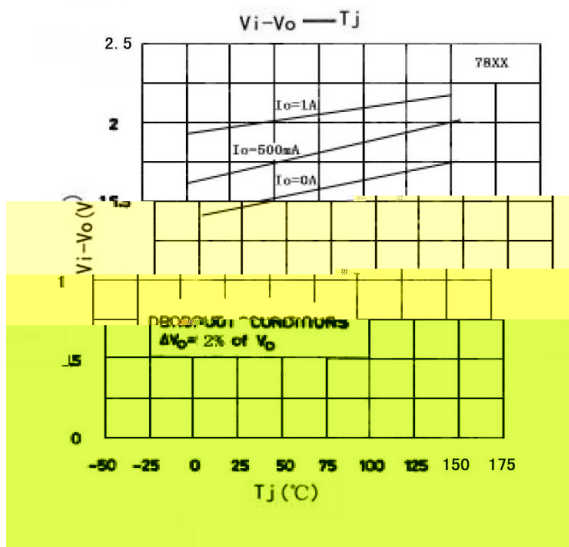
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$ -)

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 Temperature Range	T_{OPR}	-40 125	
Storage temperature range	T_{stg}	-65 150	

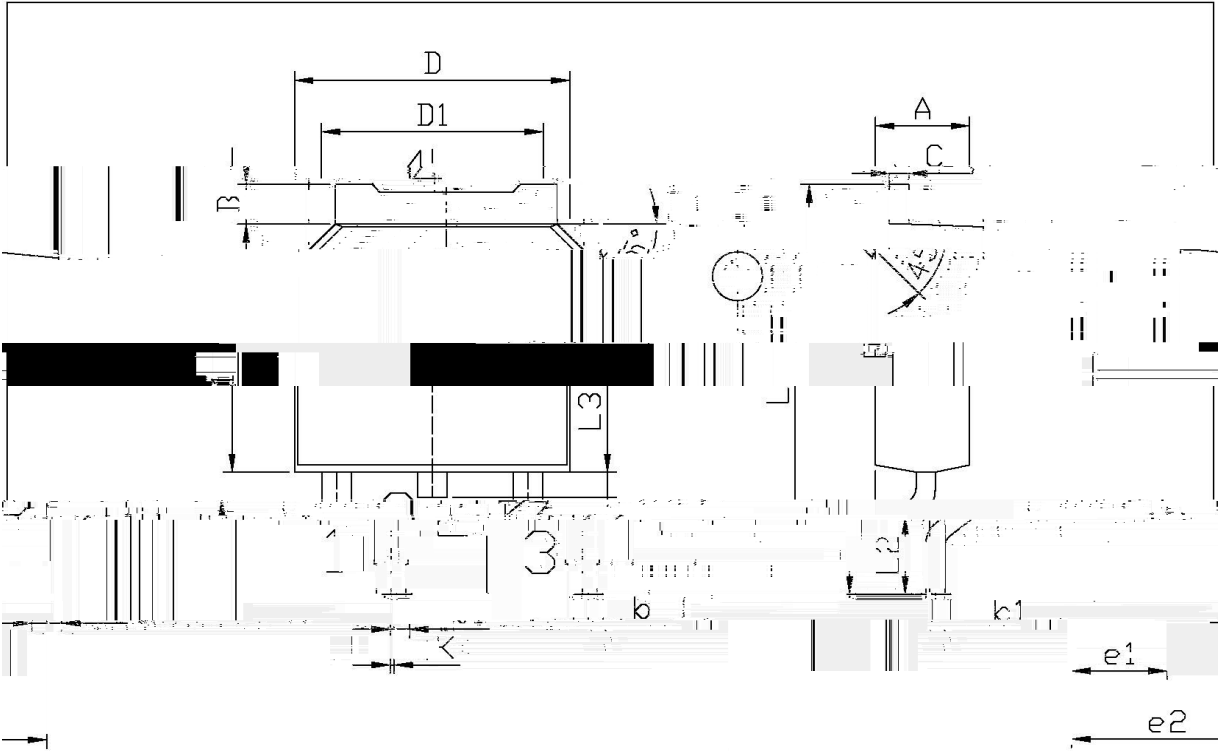
/ Electrical Characteristics($T_a=25^\circ\text{C}$ - $V_i=19\text{V}$, $I_o=500\text{mA}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_o	$T_j=25^\circ\text{C}$	11.5	12.0	12.5	V
		$V_i=14.5\text{V}-27\text{V}$ $I_o=5\text{mA}-1\text{A}$ $P_o \leq 15\text{W}$	11.4	12.0	12.6	V
Load Regulation	V_o	$T_j=25^\circ\text{C}$ $I_o=5.0\text{mA}-1.5\text{A}$			240	mV
		$T_j=25^\circ\text{C}$ $I_o=250\text{mA}-750\text{mA}$			120	mV
Line regulation	V_o	$T_j=25^\circ\text{C}$ $V_i=14.5\text{V}-30\text{V}$			240	mV
		$T_j=25^\circ\text{C}$ $V_i=16\text{V}-22\text{V}$			120	mV
Quiescent Current	I_q	$T_j=25^\circ\text{C}$			8.0	mA
Quiescent Current Change	I_q	$V_i=14.5\text{V}-30\text{V}$			1.0	mA
		$I_o=5\text{mA}-1\text{A}$			0.5	mA
Output Voltage Drift	V_o / T	$I_o=5\text{mA}$		-1		mV/
Output Noise Voltage	eN	B=10Hz-100KHz $T_j=25^\circ\text{C}$		75		$\mu\text{V}/V_o$
Supply Voltage Rejection	SVR	$V_i=15\text{V}-25\text{V}$ $f=120\text{Hz}$	55			dB
Dropout Voltage	V_d	$I_o=1\text{A}$ $T_j=25^\circ\text{C}$		2.0		V
Output Resistance	R_o	$f=1\text{KHz}$		18		$\text{m}\Omega$
Short Circuit Current	I_{sc}	$V_i=35\text{V}$ $T_j=25^\circ\text{C}$		0.35		A
Short Circuit Peak Current	I_{scp}	$T_j=25^\circ\text{C}$		2.2		A

/ Electrical Characteristic Curve



/ Package Dimensions

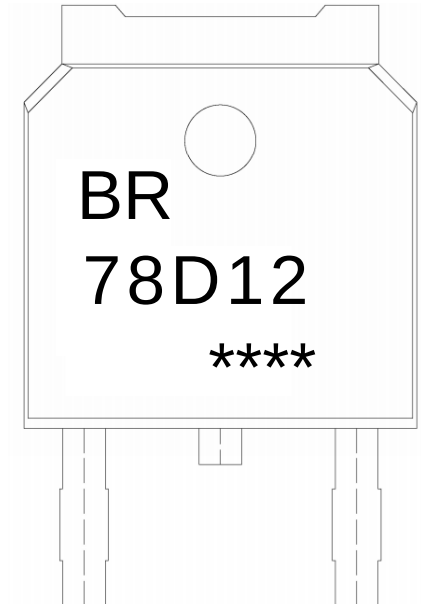


单位: mm

Symbol		Dimensions In Millimeters		Symbol		Dimensions In Millimeters	
		Min	Max			Min	Max
95	6.25			2.20	2.10		
2.24	2.34			B	0.95	1.25	e1
4.42	4.72			b	0.70	0.90	e2
85	10.35			b1	0.45	0.55	L1
	0.45	0.55			1.70	2.00	
3.75	3	0.60	0.90	D		6.45	
5.10	5.50	0.00	0.10	D1			

T0-252

/ Marking Instructions



Note:

BR: Company Code

78D12: Product Type

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

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- Note:
- 11501806090sec;

1.Preheating:150~180 , Time:60~90sec.
- 2245550.5sec;

2.Peak Temp.:245 5 , Duration:5 0.5sec.
- 3210 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260 510 1 sec.Temp.:260±5Time:10±1 sec

/ Packaging SPEC.

/ REEL

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