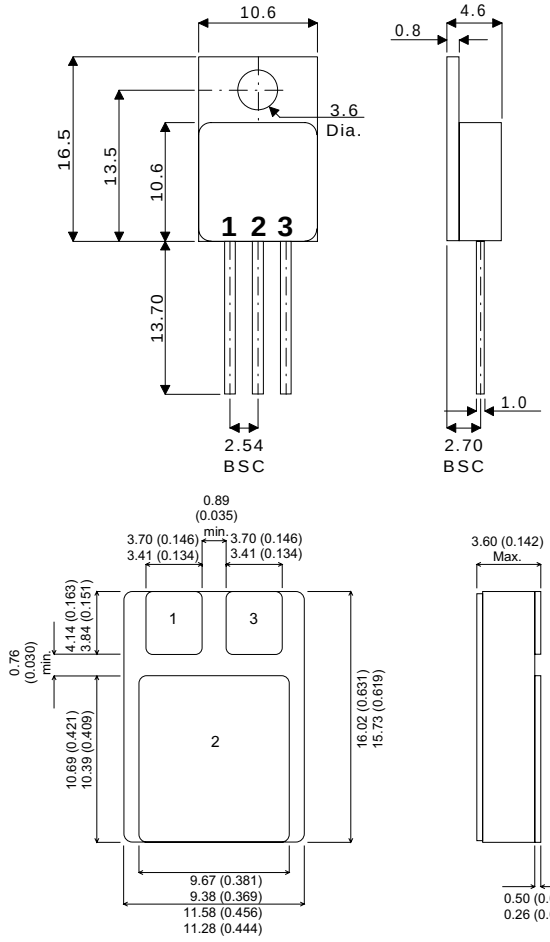
LM7900 - 220M SERIES
LM7900 - SMD SERIES

MECHANICAL DATA
Dimensions in mm



PIN 1 - Ground PIN 2 - Input PIN 3 - Output

TO220M -TO220 Metal Package - Isolated
SMD1 - Ceramic Surface Mount Package

NEGATIVE VOLTAGE REGULATOR TO 220 M

FEATURES

- **HERMETIC TO220 METAL OR CERAMIC SURFACE MOUNT PACKAGES**
- **SCREENING OPTIONS AVAILABLE**
- **ALL LEADS ISOLATED FROM CASE (METAL PACKAGE)**
- **OUTPUT CURRENT UP TO 1.5A**
- **OUTPUT VOLTAGES OF -5, -12, -15, -24V**
- **THERMAL OVERLOAD PROTECTION**
- **SHORT CIRCUIT PROTECTION**
- **OUTPUT TRANSISTOR SOA PROTECTION**
- **1% VOLTAGE TOLERANCE OPTION**

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_I	DC input voltage	(for V_O = –5 to –15V)	–35V
		(for V_O = –24V)	–40V
I_O	Output current		Internally limited
P_D	Power dissipation		Internally limited
T_j	Junction temperature		150°C
T_{stg}	Storage temperature		–65 to 150°C

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk

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ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless stated)

OUTPUT VOLTAGE			–5			–12			–15			–24			
INPUT VOLTAGE (unless otherwise specified)			–10			–19			–23			–33			
Parameter		Test Conditions	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Unit
V_O	Output Voltage	T_j = 25°C	–4.8	–5	–5.2	–11.5	–12	–12.5	–14.4	–15	–15.6	–23	–24	–25	V
		I_O = 5mA to 1A, $P_O \leq$ 15W	–4.75 (V_I = –8 to –20V)	–5	–5.25	–11.4 (V_I = –15.5 to –27V)	–12	–12.6	–14.3 (V_I = –18.5 to –30V)	–15	–15.7	–22.8 (V_I = –27 to –38V)	–24	–25.2	
ΔV_O	Line Regulation	T_j = 25°C			100 (V_I = –7 to –25V)			240 (V_I = –14.5 to –30V)			300 (V_I = –17.5 to –30V)			480 (V_I = –27 to –38V)	mV
					50 (V_I = –8 to –12V)			120 (V_I = –16 to –22V)			150 (V_I = –20 to –26V)			240 (V_I = –30 to –36V)	
ΔV_O	Load Regulation	T_j = 25°C, I_O = 5mA to 1.5A			100			240			300			480	mV
		T_j = 25°C, I_O = 250 to 750 mA			50			120			150			240	
I_d	Quiescent Current	T_j = 25°C			2			3			3			3	mA
ΔI_d	Quiescent Current Change	I_O = 5mA to 1A			0.5			0.5			0.5			0.5	mA
					1.3 (V_I = –8 to –25V)			1 (V_I = –15 to –30V)			1 (V_I = –18.5 to –30V)			1 (V_I = –27 to –38V)	
$\frac{\Delta V_O}{\Delta T}$	Output Voltage Drift	I_O = 5mA		–0.4			–0.8			–0.9			–1		mV / °C
e_N	Output Noise Voltage	T_j = 25°C, B = 10Hz to 100kHz		100			200			250			400		µV
SVR	Supply Voltage Rejection	f = 100Hz, ΔV_O = 100mV	54	60		54	60		54	60		54	60		dB
V_d	Dropout Voltage	T_j = 25°C, I_O = 1A, ΔV_O = 100mV		2			1.1			1.1			1.1		V
I_{sc}	Short Circuit Current	T_j = 25°C, V_I = 35V		2.1			1.5			1.3			1.1		mA
I_{scp}	Short Circuit Peak Current	T_j = 25°C		2.5			2.5			2.2			2.2		A

THERMAL DATA (for TO220M and SMD1)

$R_{THj\text{-}case}$	Thermal Resistance Junction – Case	Max. 3°C / W
$R_{THj\text{-}amb}$	Thermal Resistance Junction – Ambient	Max. 50°C / W

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