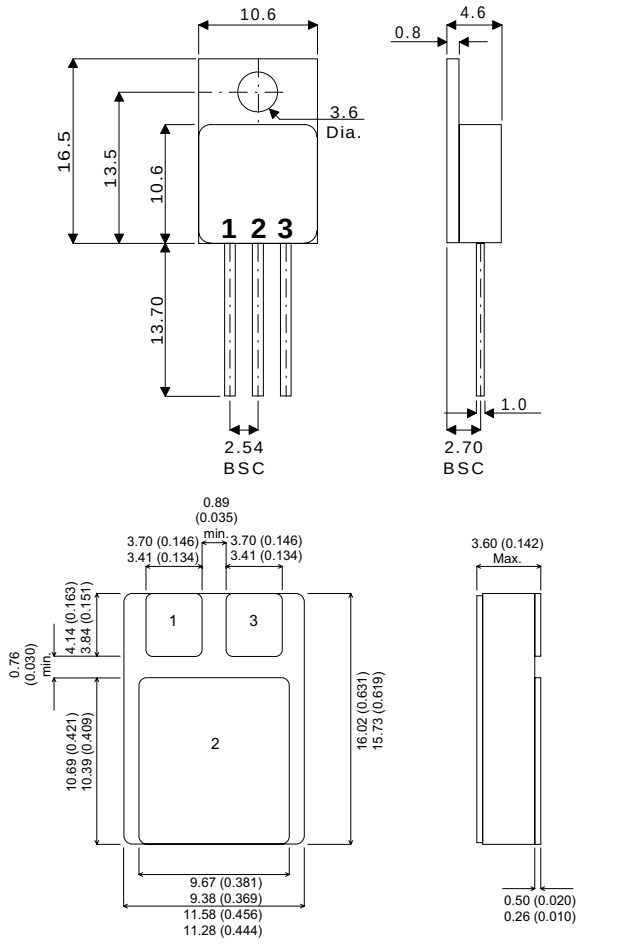
LM7900 - 220M SERIES
LM7900 - SMD SERIES

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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