



COM7900T Series

ELECTRICAL CHARACTERISTICS -5 V<sub>OUT</sub> V<sub>IN</sub> = -10V, I<sub>O</sub> = 500mA, -55°C T<sub>A</sub> 125°C (unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Output Voltage	V <sub>OUT</sub>	T <sub>A</sub> = 25°C	-4.9	-5.1	V
		V <sub>IN</sub> = -7.5V to -20V	• -4.8	-5.2	V
Line Regulation (Ntte 1)	V <sub>RLINE</sub>	V <sub>IN</sub> = -7.5V to -20V		12	mV
				25	mV
		V <sub>IN</sub> = -8.0V to -12V		5	mV
Load Regulation (Ntte 1)	V <sub>RLOAD</sub>	I <sub>B</sub> = 5mA to 1.5 Amp		20	mV
				25	mV
		I <sub>B</sub> = 250mA to 750 mA		15	mV
Standby Current Drain	I <sub>SCD</sub>			2.5	mA
				3.0	mA
Standby Current Drain Change With Line	D I <sub>SCD</sub> (Line)	V <sub>IN</sub> = -7.0V to -20V	•	0.4	mA
Standby Current Drain Change With Load	D I <sub>SCD</sub> (Load)	I <sub>B</sub> = 5mA to 1000mA	•	0.4	mA
Dropout Voltage	V <sub>DRO</sub>	DV <sub>OUT</sub> = 100mV, I <sub>O</sub> = 1.0A	•	2.5	V
Peak Output Current	I <sub>B (pk)</sub>	T <sub>A</sub> = 25°C	1.5	3.3	A
Short Circuit Current (Ntte 2)	I <sub>SS</sub>	V <sub>IN</sub> = -35V	•	1.2	A
Ripple Rejection	DV <sub>IN</sub> DV <sub>OUT</sub>	f =120 Hz, DV <sub>IN</sub> = -10V	63		dB
		(Ntte 3)	• 60		dB
Output Noise Voltage (Ntte 3)	N <sub>O</sub>	T <sub>A</sub> = 25°C, f =10 Hz to 100kHz		40	µV/V RMS
Long Term Stability (Ntte 3)	DV <sub>OUT</sub> Dt	T <sub>A</sub> = 25°C, t = 1000 hrs.		75	mV

ELECTRICAL CHARACTERISTICS -12 V<sub>OUT</sub> V<sub>IN</sub> = -19V, I<sub>O</sub> = 500mA, -55°C T<sub>A</sub> 125°C (unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Output Voltage	V <sub>OUT</sub>	T <sub>A</sub> = 25°C	-11.76	-12.24	V
		V <sub>IN</sub> = -14.5V to -21V	• -11.6	-12.4	V
Line Regulation (Ntte 1)	V <sub>RLINE</sub>	V <sub>IN</sub> = -14.5V to -21V		20	mV
				50	mV
		V <sub>IN</sub> = -16V to -22V		10	mV
Load Regulation (Ntte 1)	V <sub>RLOAD</sub>	I <sub>B</sub> = 5mA to 1.5 Amp		32	mV
				60	mV
		I <sub>B</sub> = 250mA to 750 mA		16	mV
Standby Current Drain	I <sub>SCD</sub>			3.5	mA
				4.0	mA
Standby Current Drain Change With Line	D I <sub>SCD</sub> (Line)	V <sub>IN</sub> = -14.5V to -21V	•	0.8	mA
Standby Current Drain Change With Load	D I <sub>SCD</sub> (Load)	I <sub>B</sub> = 5mA to 1000mA	•	0.5	mA
Dropout Voltage	V <sub>DRO</sub>	DV <sub>OUT</sub> = 100mV, I <sub>O</sub> = 1.0A	•	1.8	V
Peak Output Current	I <sub>B (pk)</sub>	T <sub>A</sub> = 25°C, I <sub>O</sub> = 5mA to 1A	1.5	3.3	A
Short Circuit Current (Ntte 2)	I <sub>SS</sub>	V <sub>IN</sub> = -35V	•	1.2	A
Ripple Rejection	DV <sub>IN</sub> DV <sub>OUT</sub>	f =120 Hz, DV <sub>IN</sub> = -10V	56		dB
		(Ntte 3)	• 53		dB
Output Noise Voltage (Ntte 3)	N <sub>O</sub>	T <sub>A</sub> = 25°C, f =10 Hz to 100kHz		40	µV/V RMS
Long Term Stability (Ntte 3)	DV <sub>OUT</sub> Dt	T <sub>A</sub> = 25°C, t = 1000 hrs.		120	mV

Notes:

1. Load and Line Regulation are specified at a constant junction temperature. Pulse testing with low duty cycle is used. Changes in output voltage due to heating effects must be taken into account separately.
  2. Short Circuit protection is only assured up to V<sub>IN</sub> = -35V.
  3. If not tested, shall be guaranteed to the specified limits.
- The • denotes the specifications which apply over the full operating temperature range.

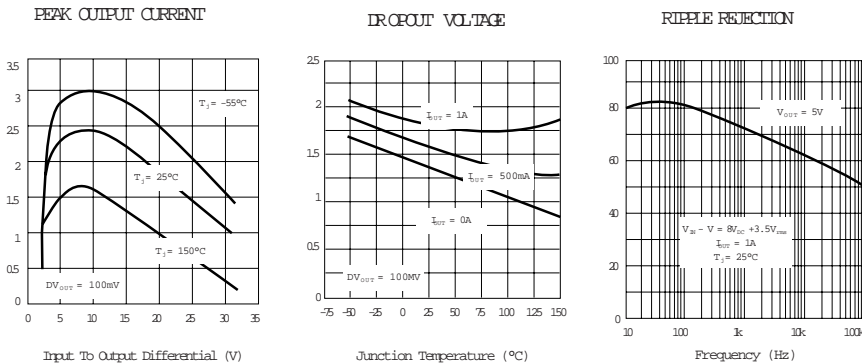
ELECTRICAL CHARACTERISTICS -15 Volt  $V_{IN} = -23V, I_O = 500mA, -55^{\circ}C \leq T_A \leq 125^{\circ}C$  (unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Output Voltage	$V_{OUT}$	$T_A = 25^{\circ}C$	-14.7	-15.3	V
		$V_{IN} = -17.5V$ to $-30V$	• -14.5	-15.5	V
Line Regulation (Note 1)	$V_{RLINE}$	$V_{IN} = -17.5V$ to $-30V$	•	25	mV
			•	50	mV
		$V_{IN} = -20V$ to $-26V$	•	15	mV
Load Regulation (Note 1)	$V_{RLOAD}$	$I_O = 5mA$ to $1.5A$ mp	•	35	mV
			•	75	mV
		$I_O = 250mA$ to $750mA$	•	21	mV
Standby Current Drain	$I_{SCD}$		•	6.0	mA
			•	6.5	mA
Standby Current Drain Change With Line	$D I_{SCD}$ (Line)	$V_{IN} = -17.5V$ to $-30V$	•	0.8	mA
Standby Current Drain Change With Load	$D I_{SCD}$ (Load)	$I_O = 5mA$ to $1000mA$	•	0.5	mA
Dropout Voltage	$V_{DO}$	$DV_{OUT} = 100mV, I_O = 1.0A$	•	2.5	V
Peak Output Current	$I_{PK}$	$T_A = 25^{\circ}C$	1.5	3.3	A
Short Circuit Current (Note 2)	$I_{SC}$	$V_{IN} = -35V$	•	1.2	A
Ripple Rejection	$DV_{IN}$ $DV_{OUT}$	$f = 120Hz, DV_{IN} = -10V$	•	53	dB
		(Note 3)	•	50	dB
Output Noise Voltage (Note 3)	$N_O$	$T_A = 25^{\circ}C, f = 10Hz$ to $100kHz$		40	$\mu V/V$ RMS
Long Term Stability (Note 3)	$\frac{DV_{OUT}}{Dt}$	$T_A = 25^{\circ}C, t = 1000hrs.$		150	mV

Notes:

1. Load and Line Regulation are specified at a constant junction temperature. Pulse testing with low duty cycle is used. Changes in output voltage due to heating effects must be taken into account separately.
  2. Short Circuit protection is only assured up to  $V_{IN} = -35V$ .
  3. If not tested, shall be guaranteed to the specified limits.
- The • denotes the specifications which apply over the full operating temperature range.

TYPICAL PERFORMANCE CHARACTERISTICS

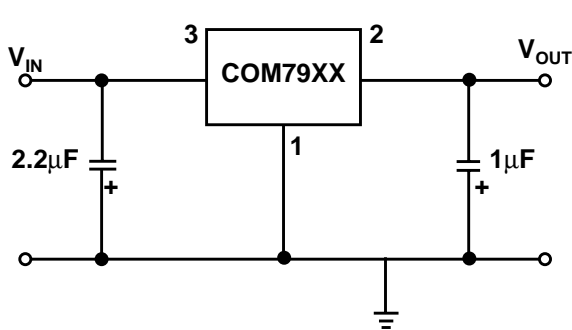


### TYPICAL APPLICATIONS

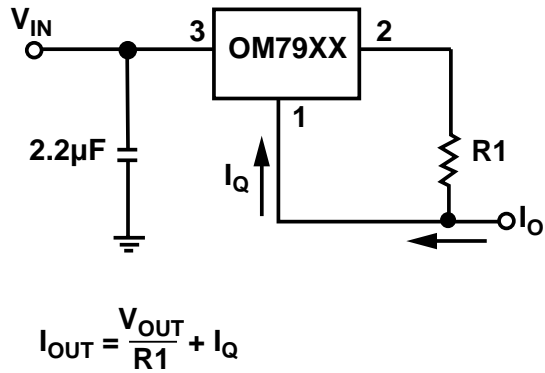
Input bypass capacitors are recommended for stable operation of the OM7900 series of regulators over the input voltage and output current ranges. Output bypass capacitors will improve the transient response of the regulator.

The bypass capacitors, (2.2µF on the input, 1µF on the output) should be ceramic or solid tantalum which have good high frequency characteristics. If aluminum electrolytics are used, their values should be 10µF or larger. The bypass capacitors should be mounted with the shortest leads, and if possible, directly across the regulator terminals.

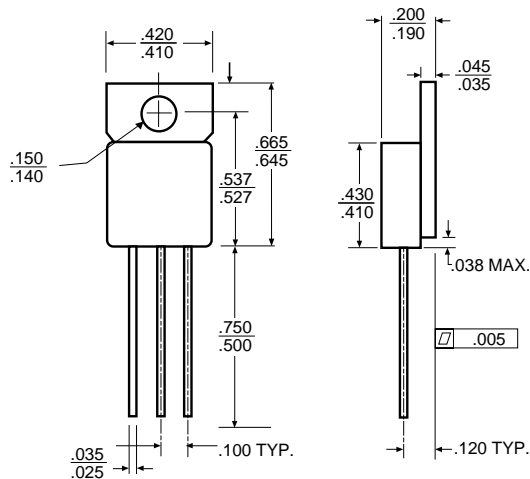
Fixed Output Regulator



Basic Current Regulator

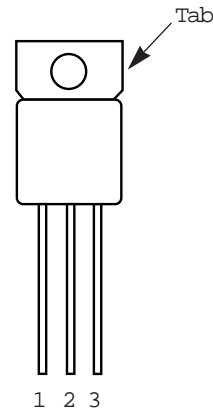


MECHANICAL OUTLINE  
TO-257AA



PIN CONNECTION

COM79XXT  
Isolated  
Front View  
Pin 1: Ground  
Pin 2: Input  
Pin 3: Output  
Tab: Isolated



Note:

- Case is metal/hemetically sealed
- Isolated Tab/Glass Feedthroughs