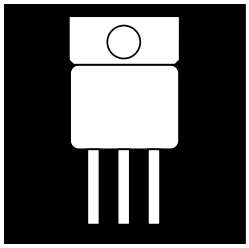
ISOLATED HERMETIC TO-258AA FIXED POSITIVE VOLTAGE REGULATORS



Three Terminal, Fixed Positive Voltage, 3.0 Amp Precision Positive Regulator In Hermetic JEDEC TO-258AA Package

FEATURES

- Isolated Hermetic Package. JEDEC TO-258AA Outline
- Ouput Voltages: 5V, 12V And 15V (Other Voltages Available)
- Output Volatges Set Internally To ±2% (±1% Available)
- Built-In Thermal Overload Protection
- Short Circuit Current Limiting
- Product Is Available Hi-Rel Screened

DESCRIPTION

These three terminal positive regulators are supplied in a hermetically sealed metal package whose outline is similar to the industry standard TO-247 plastic package. All protective features are designed into the circuit, including thermal shutdown, current limiting and safe-area control. With heat sinking, they can deliver over 3.0 amps of output current. These units feature ±2% initial voltage tolerance, with 0.3% load regulation and .01% line regulation.

ABSOLUTE MAXIMUM RATINGS @ 25°C

Input to Output Voltage Differential . . . . . +35V
Operating Junction Temperature Range . . . . . - 55°C to + 150°C
Storage Temperature Range . . . . . - 55°C to + 150°C
Typical Power/Thermal Characteristics:
Rated Power @ 25°C
T_C 25W
T_A 3W
Thermal Resistance:
q_{JC} . . . . . 3.5°C/W
q_{JA} . . . . . 42°C/W

Note: For ±1% device, add letter “A” in front of part number (e.g. OMA 7662SC).

ELECTRICAL CHARACTERISTICS: 5 VOLT OUTPUT (OM7662SC)

Parameter	Test Conditions	Min.	Typ.	Max.	Units
V_{OUT}	T_J = 25°C, V_{IN} = 12 V, I_O = 10 mA	4.90	5.00	5.10	V
	8.0 V V_{IN} 35 V, 10 mA I_O 3 A; P 25 W	4.80	5.00	5.20	
Line Regulation (Note 1)	8.0 V V_{IN} 35 V	-	.03	.06	%/V
Load Regulation	10 mA I_O 3.0 A	-	20	55	mV
Thermal Regulation	T_A = 25°C, 20 mS Pulse	-	.005	.013	%/W
Ripple Rejection	f = 120 Hz; V_{OUT} = 5 V	-	65	-	dB
Miminum Load		-	-	10	mA
Current Limit	V_{IN} = 13 V, T_J = 25°C	3	4.5	-	A
Temperature Stability		-	1.0	2.0	%
RMS Output Noise	T_A = 25°C, 10 Hz f 10 kHz	-	.001	-	%

Note 1: Regulation is measured at a constant T_J. Changes in output due to heating must be taken into account separately. Pulse testing with low duty cycle is used.

ELECTRICAL CHARACTERISTICS: 12 VOLT OUTPUT (OM7663SC)

Parameter	Test Conditions	Min.	Typ.	Max.	Units
V_{OUT}	T_J = 25°C, V_{IN} = 18 V, I_O = 10 mA	11.76	12.00	12.24	V
	15 V V_{IN} 35 V, 10 mA I_O 3 A; P 25 W	11.53	12.00	12.48	
Line Regulation (Note 1)	15 V V_{IN} 35 V	-	.03	.06	%/V
Load Regulation	10 mA I_O 3.0 A	-	60	132	mV
Thermal Regulation	T_A = 25°C, 20 mS Pulse	-	.005	.013	%/W
Ripple Rejection	f = 120 Hz; V_{OUT} = 12 V	-	65	-	dB
Miminum Load		-	-	10	mA
Current Limit	V_{IN} = 20 V, T_J = 25°C	3	4.5	-	A
Temperature Stability		-	1.0	2.0	%
RMS Output Noise	T_A = 25°C, 10 Hz f 10 kHz	-	.001	-	%

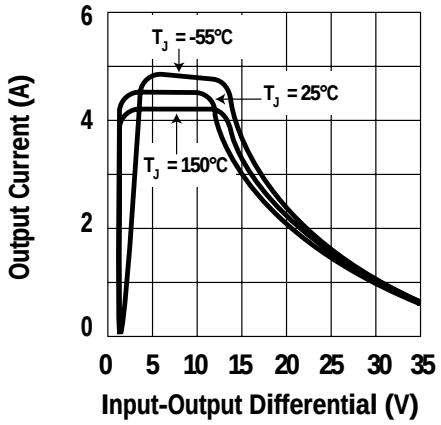
Note 1: Regulation is measured at a constant T_J. Changes in output due to heating must be taken into account separately. Pulse testing with low duty cycle is used.

ELECTRICAL CHARACTERISTICS: 15 VOLT OUTPUT (OM7664SC)

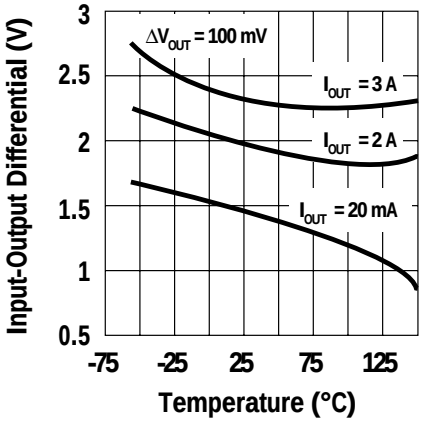
Parameter	Test Conditions	Min.	Typ.	Max.	Units
V_{OUT}	T_J = 25°C, V_{IN} = 23 V, I_O = 10 mA	14.70	15.00	15.3	V
	18 V V_{IN} 35 V, 10 mA I_O 3 A; P 25 W	14.41	15.00	15.60	
Line Regulation (Note 1)	18 V V_{IN} 35 V	-	.03	.06	%/V
Load Regulation	10 mA I_O 3.0 A	-	75	165	mV
Thermal Regulation	T_A = 25°C, 20 mS Pulse	--	.005	.013	%/W
Ripple Rejection	f = 120 Hz; V_{OUT} = 15 V		65		dB
Miminum Load		-	-	10	mA
Current Limit	V_{IN} = 23 V, T_J = 25°C	3	4.5	-	A
Temperature Stability		-	1.0	2.0	%
RMS Output Noise	T_A = 25°C, 10 Hz f 10 kHz	-	.001	-	%

Note 1: Regulation is measured at a constant T_J. Changes in output due to heating must be taken into account separately. Pulse testing with low duty cycle is used.

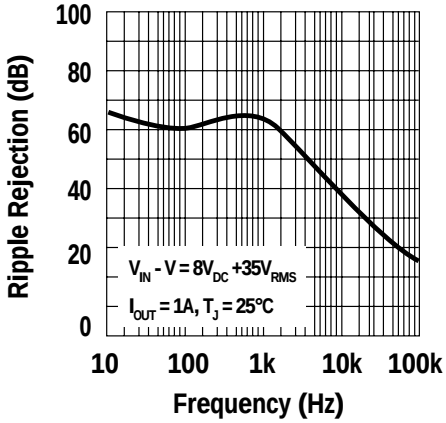
Current Limit



Dropout Voltage



Ripple Rejection

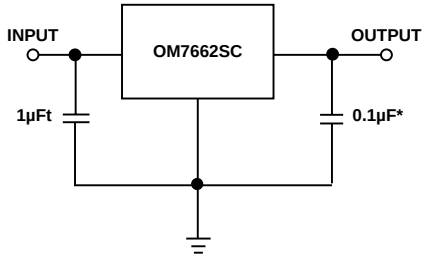


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TYPICAL APPLICATIONS

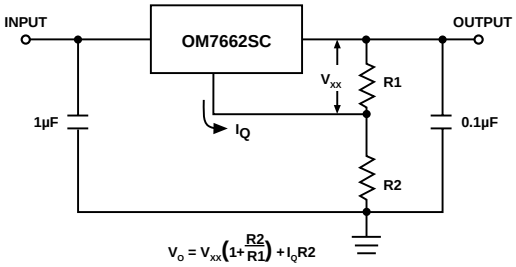
Fixed Output Regulator



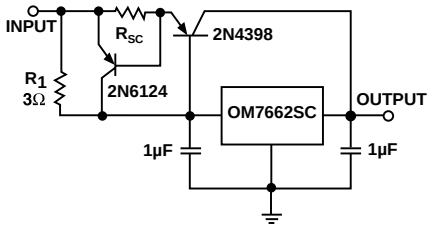
***Increasing value of output capacitor improves system transient response.**

tRequired only if regulator is located an appreciable distance from power supply filter.

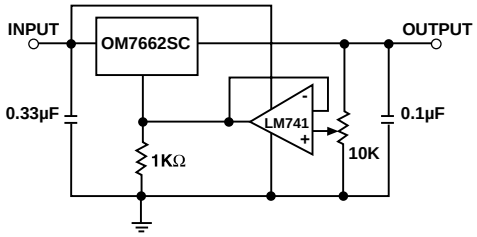
Circuit For Increasing Output Voltage



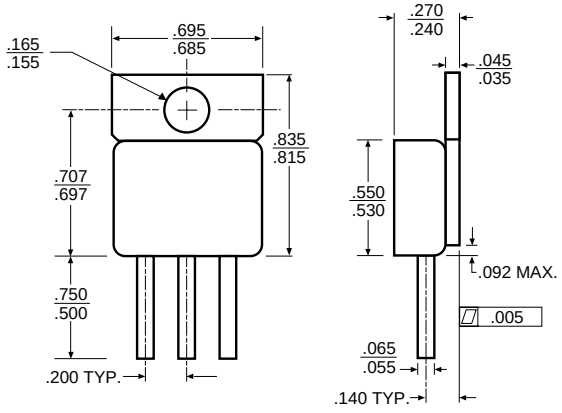
High Output Current, Short Circuit Protected



Adjustable Output Regulator, 7 To 30 Volts



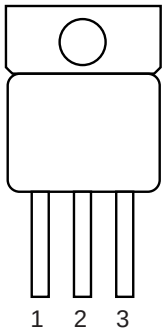
MECHANICAL OUTLINE



NOTES:

- Case is metal/hermetically sealed
- Isolated Tab

PIN CONNECTION



Front View
Pin 1: Ground
Pin 2: Output
Pin 3: Input

This device is also available in a TO-257AA package. Call the factory for test conditions and limits.

Omnirel 205 Crawford Street, Leominster, MA 01453 USA (508) 534-5776 FAX (508) 537-4246