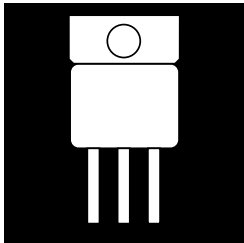


ISOLATED HERMETIC TO-258AA FIXED POSITIVE VOLTAGE REGULATORS



**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
- Output Voltages: 5V, 12V And 15V (Other Voltages Available)
- Output Voltages Set Internally To $\pm 2\%$ ($\pm 1\%$ 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 $\pm 2\%$ 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:

θ_{JC} 3.5°C/W
 θ_{JA} 42°C/W

3.3

Note: For $\pm 1\%$ device, add letter "A" in front of part number (e.g. OMA 7662SC).

OM7662SC - OM7664SC

ELECTRICAL CHARACTERISTICS: 5 VOLT OUTPUT (OM7662SC)

Parameter	Test Conditions	Min.	Typ.	Max.	Units
V_{OUT}	$T_J = 25^{\circ}\text{C}$, $V_{IN} = 12\text{ V}$, $I_O = 10\text{ mA}$	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	$T_A = 25^{\circ}\text{C}$, 20 mS Pulse	-	.005	.013	%/W
Ripple Rejection	$f = 120\text{ Hz}$; $V_{OUT} = 5\text{ V}$	-	65	-	dB
Minimum Load		-	-	10	mA
Current Limit	$V_{IN} = 13\text{ V}$, $T_J = 25^{\circ}\text{C}$	3	4.5	-	A
Temperature Stability		-	1.0	2.0	%
RMS Output Noise	$T_A = 25^{\circ}\text{C}$, 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}	$T_J = 25^{\circ}\text{C}$, $V_{IN} = 18\text{ V}$, $I_O = 10\text{ mA}$	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	$T_A = 25^{\circ}\text{C}$, 20 mS Pulse	-	.005	.013	%/W
Ripple Rejection	$f = 120\text{ Hz}$; $V_{OUT} = 12\text{ V}$	-	65	-	dB
Minimum Load		-	-	10	mA
Current Limit	$V_{IN} = 20\text{ V}$, $T_J = 25^{\circ}\text{C}$	3	4.5	-	A
Temperature Stability		-	1.0	2.0	%
RMS Output Noise	$T_A = 25^{\circ}\text{C}$, 10 Hz f 10 kHz	-	.001	-	%

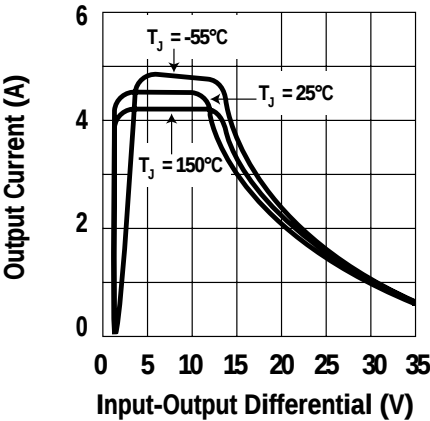
Note 1: Regulation is measured at a constant T_J . Changes in output due to heating must be taken into account separately.
Pulse testing with low duty cycle is used.

ELECTRICAL CHARACTERISTICS: 15 VOLT OUTPUT (OM7664SC)

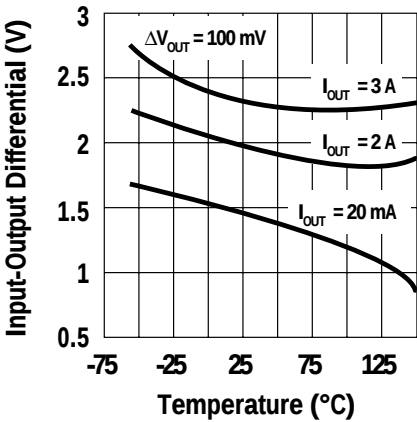
Parameter	Test Conditions	Min.	Typ.	Max.	Units
V_{OUT}	$T_J = 25^{\circ}\text{C}$, $V_{IN} = 23\text{ V}$, $I_O = 10\text{ mA}$	14.70	15.00	15.3	V
	18 V V_{IN} 35 V, 10 mA I_O 3 A; P 25 W	14.41	15.00	15.60	
Line Regulation (Note 1)	18 V V_{IN} 35 V	-	.03	.06	%/V
Load Regulation	10 mA I_O 3.0 A	-	75	165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

