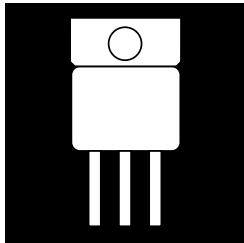


ISOLATED HERMETIC TO-258AA FIXED VOLTAGE REGULATORS



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

FEATURES

- Isolated Hermetic Package, JEDEC TO-258AA Outline
- Output Voltages: -5V, -12V And -15V
- Output Voltages Set Internally To $\pm 2\%$ ($\pm 1\%$ Available)
- Built-In Thermal Overload Protection
- Short Circuit Current Limiting
- Product Is Available Screened To MIL-STD-883

DESCRIPTION

These three terminal negative 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 $\pm 1\%$ available on request.

ABSOLUTE MAXIMUM RATINGS @ 25°C

Input Voltage	-35V
Operating Junction Temperature Range	-55°C to +150°C
Storage Temperature Range	-65° 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

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Note: For $\pm 1\%$ device. add letter "A" in front of part number (e.g. OMA 7608SC).

OM7608SC - OM7610SC

ELECTRICAL CHARACTERISTICS: -5 VOLT OUTPUT (OM7608SC) $T_J = -55\text{ C to } +125\text{ C}$

Parameter	Test Conditions	Min.	Typ.	Max.	Units
V_{OUT}	$T_J = 25^\circ\text{C}$, $V_{IN} = 10\text{ V}$, $I_O = 5.0\text{ mA}$	-4.90	-5.00	-5.10	V
	8.0 V V_{IN} 35 V, 5 mA I_O 3 A; P 25 W	-4.86	-5.00	-5.14	
Line Regulation (Note 1)	8.0 V V_{IN} 35 V, $T_J = 25^\circ\text{C}$	-	10	25	mV
Load Regulation (Note 1)	5.0 mA I_O 3.0 A, $T_J = 25^\circ\text{C}$	-	20	75	mV
Thermal Regulation	$T_A = 25^\circ\text{C}$, 20 mS Pulse	-	.002	.01	%/W
Ripple Rejection	$f = 120\text{ Hz}$; $V_{OUT} = 5.0\text{ V}$	-	66	-	dB
Minimum Load Current	$V_{IN} = 35\text{ V}$	-	-	15	mA
Current Limit	$V_{IN} = -13\text{ V}$	3	4.3	-	A
Temperature Stability	-55°C T $+150^\circ\text{C}$	-	-	2.0	%
RMS Output Noise (% of V_{OUT})	$T_A = 25^\circ\text{C}$, 10 Hz f 10 kHz	-	.005	-	%

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 (OM7609SC) $T_J = -55\text{ C to } +125\text{ C}$

Parameter	Test Conditions	Min.	Typ.	Max.	Units
V_{OUT}	$T_J = 25^\circ\text{C}$, $V_{IN} = 15\text{ V}$, $I_O = 10\text{ mA}$	-11.76	-12.00	-12.24	V
	15 V V_{IN} 35 V, 5 mA I_O 3 A; P 25 W	-11.66	-12.06	-12.33	
Line Regulation (Note 1)	15 V V_{IN} 35 V, $T_J = 25^\circ\text{C}$	-	10	60	mV
Load Regulation (Note 1)	5 mA I_O 3.0 A, $T_J = 25^\circ\text{C}$	-	40	90	mV
Thermal Regulation	$T_A = 25^\circ\text{C}$, 20 mS Pulse	-	.002	.02	%/W
Ripple Rejection	$f = 120\text{ Hz}$; $V_{OUT} = 12\text{ V}$	-	66	-	dB
Minimum Load Current	$V_{IN} = 35\text{ V}$	-	-	15	mA
Current Limit	$V_{IN} = -20\text{ V}$	3	4.3	-	A
Temperature Stability	-55°C T $+150^\circ\text{C}$	-	-	2.0	%
RMS Output Noise (% of V_{OUT})	$T_A = 25^\circ\text{C}$, 10 Hz f 10 kHz	-	.005	-	%

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.

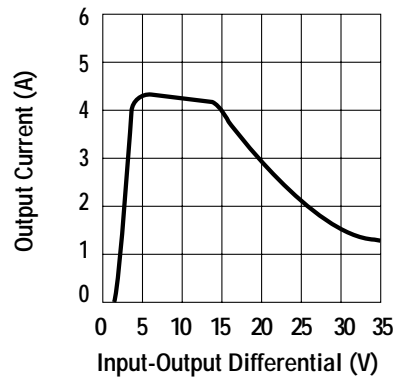
OM7608SC - OM7610SC

ELECTRICAL CHARACTERISTICS: -15 Volt Output (OM7610SC) $T_J = -55\text{ C to } +125\text{ C}$

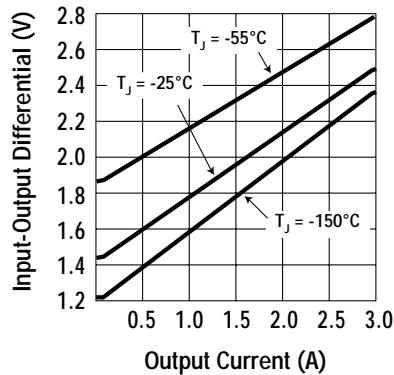
Parameter	Test Conditions	Min.	Typ.	Max.	Units
V_{OUT}	$T_J = 25^\circ\text{C}$, $V_{IN} = 23\text{ V}$, $I_O = 5\text{ mA}$	-14.70	-15.00	-15.30	V
	18 V V_{IN} 35 V, 5 mA I_O 3 A; P 25 W	-14.58	-15.00	-15.42	
Line Regulation (Note 1)	18 V V_{IN} 35 V, $T_J = 25^\circ\text{C}$	-	10	75	mV
Load Regulation (Note 1)	5 mA I_O 3.0 A, $T_J = 25^\circ\text{C}$	-	50	100	mV
Thermal Regulation	$T_A = 25^\circ\text{C}$, 20 mS Pulse	-	.002	.02	%/W
Ripple Rejection	$f = 120\text{ Hz}$; $V_{OUT} = 15\text{ V}$	-	66	-	dB
Minimum Load Current	$V_{IN} = 35\text{ V}$	-	-	15	mA
Current Limit	$V_{IN} = -23\text{ V}$	3	4.3	-	A
Temperature Stability	-55°C T $+150^\circ\text{C}$	-	-	2.0	%
RMS Output Noise (% of V_{OUT})	$T_A = 25^\circ\text{C}$, 10 Hz f 10 kHz	-	.005	-	%

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.

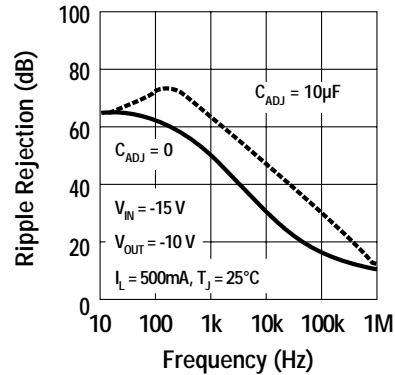
Current Limit



Dropout Voltage

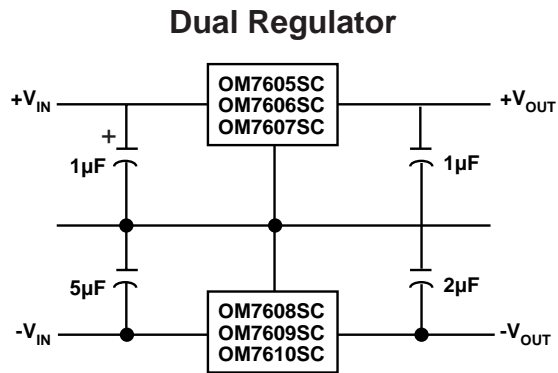
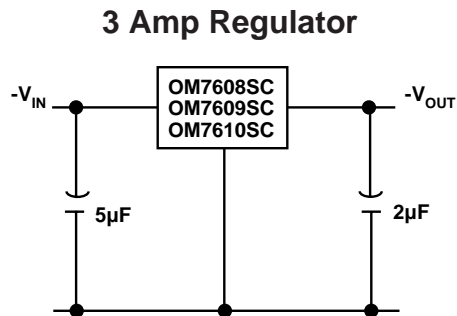


Ripple Rejection

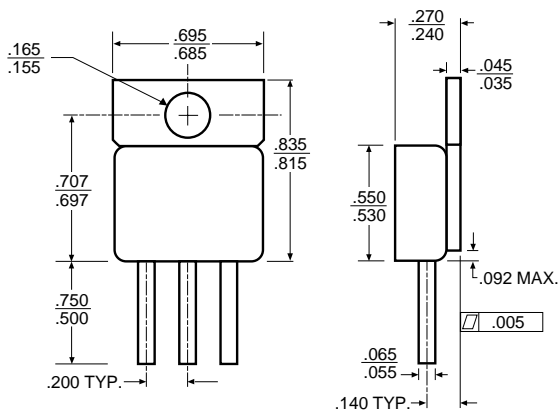


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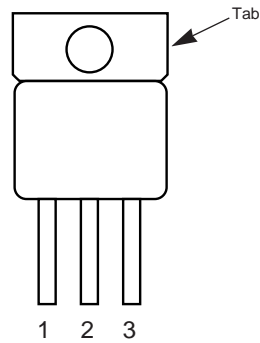
TYPICAL APPLICATIONS



MECHANICAL OUTLINE



PIN CONNECTION



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

NOTES:

- Case is metal/hermetically sealed
- Isolated Tab
- This device is also available in a TO-257AA package. Call the factory for test conditions and limits.