

TECHNICAL DATA
DATA SHEET 219, REV A
Formerly part number SHD50106

+/- DUAL FIXED 12.0 VOLT 1.5 AMP VOLTAGE REGULATOR

FEATURES:

- ISOLATED HERMETIC PACKAGE
- SIMILAR to INDUSTRY TYPE 7812 / 7912

MAXIMUM RATINGS

+12.0 Volt

All ratings are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

Parameter	Conditions		Max.	Units
Input Voltage	-	-	35	Vdc
Storage Temperature Range	-	-	-65 to +150	$^\circ\text{C}$
Lead Temperature	Soldering, 10 seconds	-	+300	$^\circ\text{C}$
Power Dissipation (P_D)	$T_C = +25^\circ\text{C}$	-	17.5	W
	$T_A = +25^\circ\text{C}$	-	3.0	W
Maximum Thermal Resistance Junction to Case (θ_{JC})	-	-	4.2	$^\circ\text{C/W}$
Maximum Thermal Resistance Junction to Ambient (θ_{JA})	-	-	42	$^\circ\text{C/W}$
Junction Operating Temperature Range (T_J)	-	-	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

+12.0 Volt

All ratings are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

Parameter	Conditions	Min.	Max.	Units
Output Voltage (V_{OUT})		11.75	12.25	V
Line Regulation (V_{RLINE})	$-55^\circ\text{C} \leq T_A \leq +125^\circ\text{C}$ $V_{IN} = 14.5\text{V to } 27\text{V}$	-	18	mV
Load Regulation (V_{RLOAD})	$I_O = 10\text{mA to } 1.5\text{A}$	-	32	mV
Load Regulation (V_{RLOAD})	$-55^\circ\text{C} \leq T_A \leq +125^\circ\text{C}$ $I_O = 10\text{mA to } 1.0\text{A}$	-	32	mV
Standby Current Drain (I_{SCD})	-	-	6.0	mA
Standby Current Drain Change w/Line (ΔI_{SCD}) (Line)	$V_{IN} = 14.5\text{V to } 27\text{V}$	-	0.8	mA
Standby Current Drain Change w/Load (ΔI_{SCD}) (Load)	$I_O = 10\text{mA to } 1.5\text{A}$	-	0.5	mA
Dropout Voltage (V_{DO})	$\Delta V_{OUT} = 100\text{mV}$, $I_O = 1.0\text{A}$	-	2.5	V
Peak Output Current ($I_{O(pk)}$)		1.5	3.3	A
Short Circuit Current (I_{OS})	$V_{IN} = 35\text{V}$	-	1.2	A
Ripple Rejection ($\Delta V_{IN} / \Delta V_{OUT}$)*	$f = 120\text{ kHz}$, $\Delta V_{IN} = 10\text{V}$	55	-	dB
Output Noise Voltage (N_o)*	$T_A = +25^\circ\text{C}$ $f = 10\text{ Hz - } 100\text{kHz}$	-	40	$\mu\text{V}/V_o$
Long Term Stability ($\Delta V_{OUT} / \Delta t$)*	$T_A = 25^\circ\text{C}$, $t = 1,000\text{hrs.}$	-	120	mV

*not tested in production

SENSITRON

TECHNICAL DATA
DATASHEET 219, REVISION A
MAXIMUM RATINGS**-12.0 Volt**All ratings are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

Parameter	Conditions		Max.	Units
Input Voltage	-	-	-35	Vdc
Storage Temperature Range	-	-	-65 to +150	$^\circ\text{C}$
Lead Temperature	Soldering, 10 seconds	-	+300	$^\circ\text{C}$
Power Dissipation (P_D)	$T_C = +25^\circ\text{C}$	-	17.5	W
	$T_A = +25^\circ\text{C}$	-	3.0	W
Maximum Thermal Resistance Junction to Case (θ_{JC})	-	-	4.2	$^\circ\text{C/W}$
Maximum Thermal Resistance Junction to Ambient (θ_{JA})	-	-	42	$^\circ\text{C/W}$
Junction Operating Temperature Range (T_J)	-	-	-55 to +150	$^\circ\text{C}$

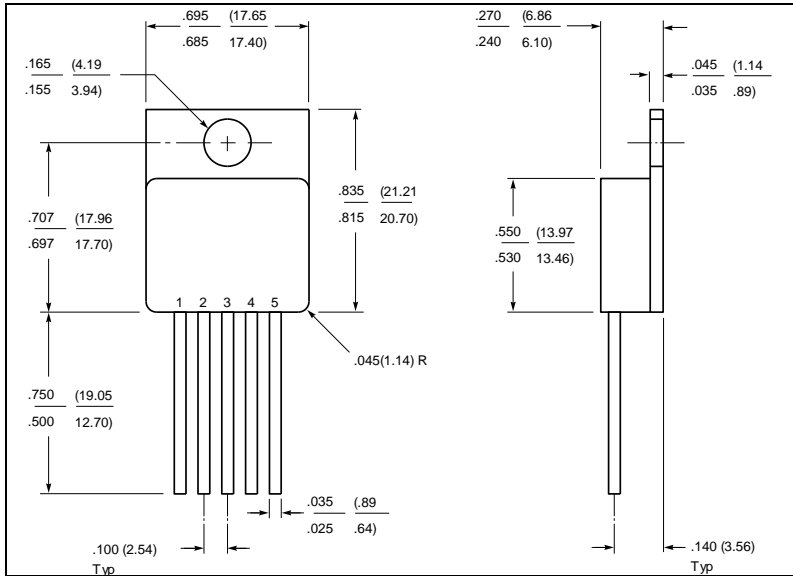
ELECTRICAL CHARACTERISTICS**-12.0 Volt**All ratings are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

Parameter	Conditions	Min.	Max.	Units
Output Voltage (V_{OUT})	$T_A = +25^\circ\text{C}$	-11.50	-12.50	V
Line Regulation (V_{RLINE})	$-55^\circ\text{C} \leq T_A \leq +125^\circ\text{C}$ $V_{IN} = -14.5\text{V to } -27\text{V}$	-	20	mV
Load Regulation (V_{RLOAD})	$I_O = 10\text{mA to } 1.5\text{A}$	-	150	mV
Load Regulation (V_{RLOAD})	$-55^\circ\text{C} \leq T_A \leq +125^\circ\text{C}$ $I_O = 10\text{mA to } 1.0\text{A}$	-	150	mV
Standby Current Drain (I_{SCD})	-	-	8.0	mA
Standby Current Drain Change w/Line (ΔI_{SCD}) (Line)	$V_{IN} = -14.5\text{V to } -27\text{V}$	-	0.8	mA
Standby Current Drain Change w/Load (ΔI_{SCD}) (Load)	$I_O = 10\text{mA to } 1.5\text{A}$	-	0.5	mA
Dropout Voltage (V_{DO})	$\Delta V_{OUT} = 100\text{mV}$, $I_O = 1.0\text{A}$	-	1.8	V
Peak Output Current ($I_{O(pk)}$)	$T_A = +25^\circ\text{C}$, $I_O = 5\text{mA to } 1\text{A}$	1.5	3.3	A
Short Circuit Current (I_{OS})	$V_{IN} = -35\text{V}$	-	1.2	A
Ripple Rejection ($\Delta V_{IN} / \Delta V_{OUT}$)*	$f = 120\text{ kHz}$, $\Delta V_{IN} = 10\text{V}$	56	-	dB
Output Noise Voltage (N_O)*	$T_A = +25^\circ\text{C}$ $f = 10\text{ Hz - } 100\text{kHz}$	-	150	μV
Long Term Stability ($\Delta V_{OUT} / \Delta t$)*	$T_A = 25^\circ\text{C}$, $t = 1,000\text{hrs.}$	-	120	mV

*not tested in production

SENSITRON
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MECHANICAL DIMENSIONS: In Inches/ mm



MO-078

PINOUT TABLE

TYPE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5
5-Voltage Regulator MO-078 Package	+ Input	+ Output	Common	- Input	- Output

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