

TECHNICAL DATA  
DATA SHEET 178, REV. A  
Formerly part number SHD52625

## FIXED NEGATIVE 12.0 VOLT 1.5 AMP REGULATOR

### FEATURES:

- ISOLATED HERMETIC PACKAGE
- SIMILAR to INDUSTRY TYPE LM7912A

### MAXIMUM RATINGS

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

Parameter	Conditions	Typical	Limit	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 ( $P_D$ )	$T_C = +25^\circ\text{C}$ $T_A = +25^\circ\text{C}$	-	15	W
		-	3.0	W
Maximum Thermal Resistance Junction to Case ( $\theta_{JC}$ )	-	-	4.2	$^\circ\text{C/W}$
Maximum Thermal Resistance Junction to Ambient ( $\theta_{JA}$ )	-	-	42	$^\circ\text{C/W}$
Maximum Junction Temperature ( $T_J$ )	$I_O = 5.0 \text{ mA to } 1.0 \text{ A}$	-	150	$^\circ\text{C}$
Ambient Operating Temperature Range ( $T_A$ )	-	-	-55 to +125	$^\circ\text{C}$
Input Voltage Range Recommended	-	-	-14.5 to -27	Vdc

### ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Typical	Limit	Units
Output Voltage ( $V_{OUT}$ )	$T_A = +25^\circ\text{C}$	-12.00	-11.88 -12.12	V V
Line Regulation ( $V_{RLINE}$ )	$-55^\circ\text{C} \leq T_J \leq +125^\circ\text{C}$ $V_{IN} = -14.5\text{V to } -27\text{V}$	-	20	mV
Load Regulation ( $V_{RLOAD}$ )	$-55^\circ\text{C} \leq T_J \leq +125^\circ\text{C}$ $I_O = 5.0 \text{ mA to } 1.5 \text{ A}$	-	32	mV
Standby Current Drain ( $I_{SCD}$ )	-	-	3.5	mA
Standby Current Drain Change w/Line ( $\Delta I_{SCD}$ ) (Line)	$V_{IN} = -14.5 \text{ V to } -27 \text{ V}$	-	0.8	mA
Standby Current Drain Change w/Load ( $\Delta I_{SCD}$ ) (Load)	$I_O = 5.0 \text{ mA to } 1000 \text{ mA}$	-	0.5	mA
Dropout Voltage ( $V_{DO}$ )	$I_O = 1.0\text{A}$	-	1.8	V
Peak Output Current ( $I_{O(pk)}$ )	$T_A = +25^\circ\text{C}$	-	3.3	A
Short Circuit Current ( $I_{OS}$ )	$V_{IN} = -35\text{V}$	-	1.2	A
Ripple Rejection ( $\Delta V_{IN} / \Delta V_{OUT}$ )	$f_o = 120 \text{ kHz}$ , $V_{IN} = 10\text{V}$ $I_O = 5.0\text{mA}$	56	-	dB
Output Noise Voltage ( $N_O$ )	$T_A = +25^\circ\text{C}$ 10 Hz - 100kHz	-	40	$\mu\text{V}_{rms}$
Long Term Stability ( $\Delta V_{OUT} / \Delta t$ )	$T_A = 25^\circ\text{C}$ , $t = 1,000$	-	120	mV

**Note:** Output Voltage tolerance; +/- 1% @  $25^\circ\text{C}$ , +/- 2% from  $-55^\circ$  to  $+80^\circ\text{C}$

