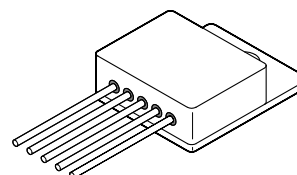


TECHNICAL DATA  
DATA SHEET 1154, REV B  
Formerly part number SHD50101

## DUAL FIXED +/- 15.0 VOLT 1.5 AMP VOLTAGE REGULATOR

### FEATURES:

- ISOLATED HERMETIC PACKAGE
- SIMILAR to INDUSTRY TYPES 7815 / 7915



### MAXIMUM RATINGS (+15V)

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

Parameter	Conditions	Maximum	Units
Input Voltage	-	35	Vdc
Ambient Operating Temperature Range ( $T_A$ )	-	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	-	-65 to +150	$^\circ\text{C}$
Thermal Resistance ( $R_{\theta JC}$ )	Per regulator	3.0	$^\circ\text{C/W}$
Rated Power	$T_C = +25^\circ\text{C}$ Per regulator	17.5	W

### ELECTRICAL CHARACTERISTICS (+15V)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
$V_O$	Output Voltage	$T_A = 25^\circ\text{C}$	14.8	15	15.2	V
		$18.5\text{V} \leq V_{IN} \leq 30\text{V}$	14.6	15	15.4	V
		$P_D \leq 15\text{W}$ , $5\text{ mA} \leq I_O \leq 1\text{A}$ $18.5\text{V} \leq V_{IN} \leq 30\text{V}$	14.4	-	15.6	V
$V_{RLINE}$	Line Regulation	$17.5\text{V} \leq V_{IN} \leq 30\text{V}$	$T_A = 25^\circ\text{C}$		20	mV
			$-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$		50	mV
		$20\text{V} \leq V_{IN} \leq 26\text{V}$	$T_C = 25^\circ\text{C}$		15	mV
			$-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$		25	mV
$V_{RLOAD}$	Load Regulation	$T_J = 25^\circ\text{C}$	$5\text{ mA} \leq I_O \leq 1.5\text{A}$		35	mV
			$250\text{ mA} \leq I_O \leq 750\text{mA}$		21	mV
		$5\text{ mA} \leq I_O \leq 1\text{A}$ , $-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$		-	75	mV
$I_Q$	Quiescent Current	$T_C = 25^\circ\text{C}$	-	-	6	mA
		$-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$	-	-	6.5	mA
$\Delta I_Q$	Quiescent Current Change	$5\text{ mA} \leq I_O \leq 1.0\text{A}$ , $-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$	-	-	0.5	mA
		$18.5\text{V} \leq V_{IN} \leq 30\text{V}$ , $-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$	-	-	0.8	mA
$V_{DO}$	Dropout Voltage	$T_C = 25^\circ\text{C}$ , $I_O = 1.0\text{A}$	-	-	2.5	V
$I_{O(pk)}$	Peak Output Current	$T_C = 25^\circ\text{C}$	1.5	-	3.3	A
$I_{OS}$	Short Circuit Current	$V_{IN} = 35\text{V}$	$T_C = 25^\circ\text{C}$		1.2	A
			$-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$		2.8	A
$\frac{\Delta V_{IN}}{\Delta V_{OUT}}$	Ripple Rejection	$f = 120\text{Hz}$ $\Delta V_{IN} = 10\text{V}$	$I_O \leq 1\text{A}$ , $T_C = 25^\circ\text{C}$		-	dB
			$I_O \leq 500\text{ mA}$ , $-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$		-	dB
$N_O$	Output Noise Voltage	$T_C = 25^\circ\text{C}$ , $f = 10\text{Hz}$ to $100\text{kHz}$	-	-	40	$\mu\text{V/V rms}$
$\frac{\Delta V_{OUT}}{\Delta t}$	Long Term Stability	$T_C = 25^\circ\text{C}$ , $t = 1000$ hours	-	-	150	mV

**Note:** Conditions unless otherwise noted:  $I_{OUT} = 500\text{ mA}$ ,  $C_{IN} = 2.2\text{ }\mu\text{F}$ ,  $C_{OUT} = 1\text{ }\mu\text{f}$ ,  $0^\circ\text{C} \leq T_J \leq +125^\circ\text{C}$ , Power Dissipation =  $1.5\text{W}$ ,  $V_{in} = 23\text{V}$ .

**DATASHEET 1154, REVISION B**  
**Formerly part number SHD50101**

**MAXIMUM RATINGS (-15V)**All ratings are at  $T_C = 25^\circ\text{C}$  unless otherwise specified.

Parameter	Conditions	Maximum	Units
Input Voltage	-	-35	Vdc
Ambient Operating Temperature Range ( $T_A$ )	-	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	-	-65 to +150	$^\circ\text{C}$
Thermal Resistance ( $R_{\theta JC}$ )	- Per regulator	3.0	$^\circ\text{C/W}$
Rated Power	$T_C = +25^\circ\text{C}$ Per regulator	17.5	W

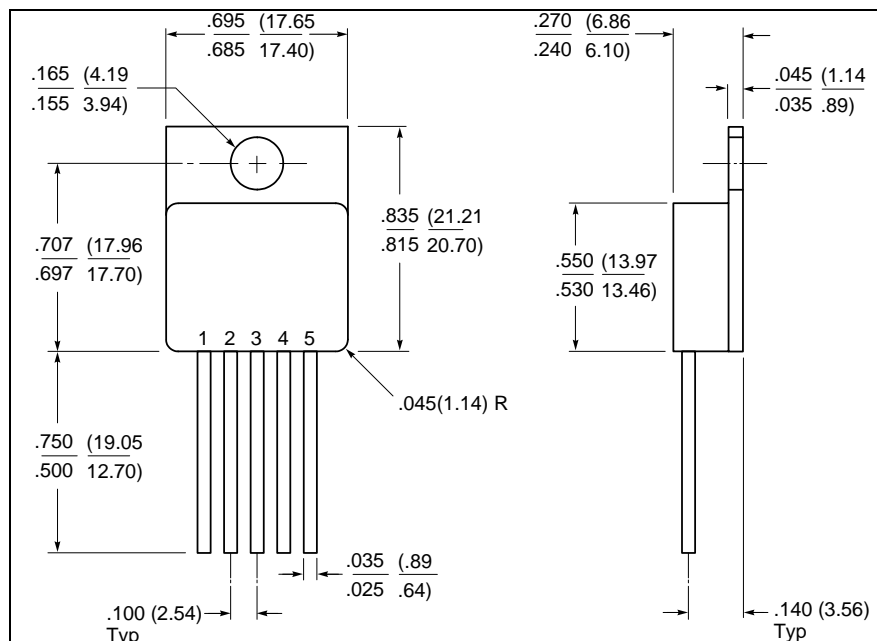
**ELECTRICAL CHARACTERISTICS (-15V)**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
$V_O$	Output Voltage	$T_A = 25^\circ\text{C}$	-15.15	-15.0	-14.85	V
		$5\text{ mA} \leq I_O \leq 1\text{ A}$	-15.75		-14.25	V
		$P \leq 15\text{ W}$				
$V_{RLINE}$	Line Regulation	$T_J = 25^\circ\text{C}$ , $V_{IN} = -17.5\text{ V to } -30\text{ V}$	-	5.0	25	mV
		$V_{IN} = -20\text{ V to } -26\text{ V}$	-	3.0	15	mV
$V_{RLOAD}$	Load Regulation	$T_J = 25^\circ\text{C}$	-	-	35	mV
		$5\text{ mA} \leq I_O \leq 1.5\text{ A}$	-	-	21	mV
		$250\text{ mA} \leq I_O \leq 750\text{ mA}$	-	-		
$I_Q$	Quiescent Current	$T_J = 25^\circ\text{C}$	-	-	6.0	mA
$\Delta I_Q$	Quiescent Current Change	With Line	-	-	0.8	mA
		With Load, $5\text{ mA} \leq I_O \leq 1\text{ A}$	-	-	0.5	mA
$V_{DO}$	Dropout Voltage	$T_J = 25^\circ\text{C}$ , $I_O = 1\text{ A}$	-	-	2.5	V
$I_{O(pk)}$	Peak Output Current	$T_J = 25$	1.5	-	3.3	A
$I_{OS}$	Short Circuit Current	$V_{IN} = -35\text{ V}$	-	-	1.2	A
		$T_C = 25^\circ\text{C}$ $-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$			2.8	
$\frac{\Delta V_{IN}}{\Delta V_{OUT}}$	Ripple Rejection	$f = 120\text{ Hz}$	54	70	-	dB
$N_o$	Output Noise Voltage	$T_A = 25^\circ\text{C}$ , $f = 10\text{ Hz} \leq f \leq 100\text{ kHz}$	-	375	-	$\mu\text{V RMS}$
$\frac{\Delta V_{OUT}}{\Delta t}$	Long Term Stability	$T_C = 25^\circ\text{C}$ , $t = 1000\text{ hours}$	-	-	150	mV

**Note:** Conditions unless otherwise noted:  $I_{OUT} = 500\text{ mA}$ ,  $C_{IN} = 2.2\text{ }\mu\text{F}$ ,  $C_{OUT} = 1\text{ }\mu\text{f}$ ,  $0^\circ\text{C} \leq T_J \leq +125^\circ\text{C}$ , Power Dissipation = 1.5W,  $V_{in} = -23\text{ V}$ .

**DATASHEET 1154, REVISION B**  
**Formerly part number SHD50101**

**MECHANICAL DIMENSIONS: In Inches / mm**



**MO-078**

**PINOUT TABLE**

TYPE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5
+15V/-15V Voltage Regulator MO-078 Package	+ Input	+ Output	Common	- Input	- Output

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