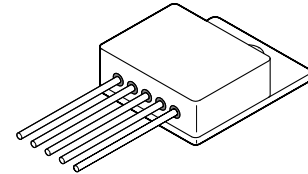


TECHNICAL DATA
DATA SHEET 1154, REV B
Formerly part number SHD50101

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 ($R_{\theta\text{JC}}$)	- 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	
		$18.5\text{V} \leq V_{\text{IN}} \leq 30\text{V}$	14.6	15	15.4	V	
		$P_D \leq 15\text{W}$, $5\text{ mA} \leq I_O \leq 1\text{A}$ $18.5\text{V} \leq V_{\text{IN}} \leq 30\text{V}$	14.4	-	15.6	V	
V_{RLINE}	Line Regulation	$17.5\text{V} \leq V_{\text{IN}} \leq 30\text{V}$	$T_A = 25^\circ\text{C}$	-	-	20	mV
			$-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$	-	-	50	mV
		$20\text{V} \leq V_{\text{IN}} \leq 26\text{V}$	$T_C = 25^\circ\text{C}$	-	-	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
		$5\text{ mA} \leq I_O \leq 1\text{A}$, $-55^\circ \leq T_C \leq +125^\circ\text{C}$	-	-	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	
ΔI_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	
		$18.5\text{V} \leq V_{\text{IN}} \leq 30\text{V}$, $-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$	-	-	0.8	mA	
V_{DO}	Dropout Voltage	$T_C = 25^\circ\text{C}$, $I_O = 1.0\text{A}$	-	-	2.5	V	
$I_{\text{O(pk)}}$	Peak Output Current	$T_C = 25^\circ\text{C}$	1.5	-	3.3	A	
I_{OS}	Short Circuit Current	$V_{\text{IN}} = 35\text{V}$	$T_C = 25^\circ\text{C}$	-	-	1.2	A
			$-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$	-	-	2.8	A
$\frac{\Delta V_{\text{IN}}}{\Delta V_{\text{OUT}}}$	Ripple Rejection	$f = 120\text{Hz}$ $\Delta V_{\text{IN}} = 10\text{V}$	$I_O \leq 1\text{A}$, $T_C = 25^\circ\text{C}$	54	70	-	dB
			$I_O \leq 500\text{ mA}$, $-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$	54	-	-	dB
N_O	Output Noise Voltage	$T_C = 25^\circ\text{C}$, $f = 10\text{Hz}$ to 100kHz	-	-	40	$\mu\text{V/V rms}$	
$\frac{\Delta V_{\text{OUT}}}{\Delta t}$	Long Term Stability	$T_C = 25^\circ\text{C}$, $t = 1000$ hours	-	-	150	mV	

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

DATASHEET 1154, REVISION B
Formerly part number SHD50101

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

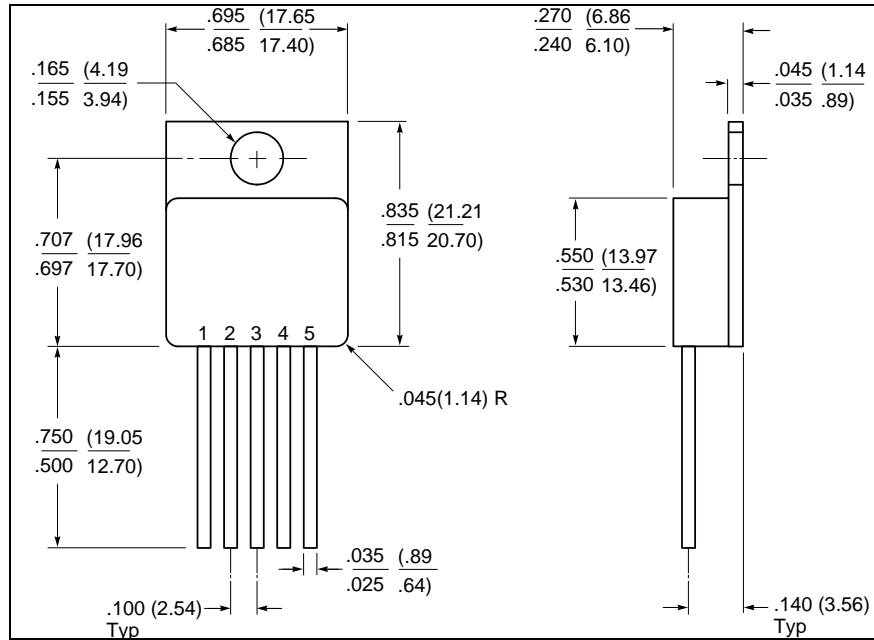
Parameter	Conditions	Maximum	Units
Input Voltage	-	-35	Vdc
Ambient Operating Temperature Range (T_A)	-	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	-	-65 to +150	$^\circ\text{C}$
Thermal Resistance ($R_{\theta\text{JC}}$)	-	Per regulator	$^\circ\text{C}/\text{W}$
Rated Power	$T_C = +25^\circ\text{C}$	Per regulator	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
		$5\text{ mA} \leq I_O \leq 1\text{ A}$ $P \leq 15\text{ W}$	-15.75		-14.25	V
V_{RLINE}	Line Regulation	$T_J = 25^\circ\text{C}$, $V_{\text{IN}} = -17.5\text{ V to } -30\text{ V}$ $V_{\text{IN}} = -20\text{ V to } -26\text{ V}$	-	5.0	25	mV
			-	3.0	15	mV
V_{RLOAD}	Load Regulation	$T_J = 25^\circ\text{C}$ $5\text{ mA} \leq I_O \leq 1.5\text{ A}$ $250\text{ mA} \leq I_O \leq 750\text{ mA}$	-	-	35	mV
			-	-	21	mV
I_Q	Quiescent Current	$T_J = 25^\circ\text{C}$	-	-	6.0	mA
ΔI_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
$I_{\text{O(pk)}}$	Peak Output Current	$T_J = 25$	1.5	-	3.3	A
I_{OS}	Short Circuit Current	$V_{\text{IN}} = -35\text{ V}$	-	-	1.2	A
		$T_C = 25^\circ\text{C}$ $-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$			2.8	
$\frac{\Delta V_{\text{IN}}}{\Delta V_{\text{OUT}}}$	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	-	$\mu\text{V RMS}$
$\frac{\Delta V_{\text{OUT}}}{\Delta t}$	Long Term Stability	$T_C = 25^\circ\text{C}$, $t = 1000\text{ hours}$	-	-	150	mV

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

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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