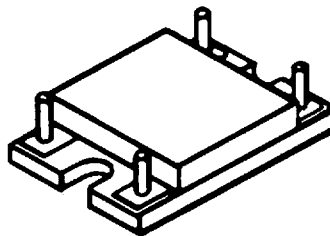


52084**1.5 AMP POSITIVE VOLTAGE REGULATOR****FEATURES**

- Electrically Isolated Package
- Surface Mount Device
- True Hermetic Seal
- Input output differential — 2.4 Volts
- Temperature Coefficient—
(-55°C to 125°C) 0.03% $V_{OUT/C}$
- Load Regulation —
0.6% V_{OUT} @ 10 mA to 1.5 Amps
- Ripple Attenuation — 60 db
- Thermal Resistance, junction to case —
2.5°C/W

**GENERAL DESCRIPTION**

The 52084 is a 1.5 Amp hybrid four terminal adjustable regulator fabricated using hybrid techniques. A hermetically sealed Beryllium Oxide package is utilized for electrical isolation and low thermal resistance. Outstanding features include full power usage, up to 1.5 Amps. of load current, excellent temperature regulation and very low output impedance which insures superior load regulation and performance.

The MII 52084 is a complement to the MII 52079 adjustable negative Regulator. (Fig.5)

A well regulated Positive output range of +4 to +30 volts can be obtained by a single potentiometer. No additional external components are required. Reduced size and a unique package makes this Regulator an ideal choice for Microwave Oscillators and Telecommunications.

ABSOLUTE MAXIMUM RATINGS FOR 52084

PARAMETER	SYMBOL	MIN	MAX	UNITS
Input Voltage	V_{IN}		35	Volts
Power Dissipation	P_O		15(1)	Watts
Thermal Resistance Junction to Case	θ_{JC}		2.5	°C/Watt
Operating Junction Temperature Range	T_J	-55	+150	°C
Storage Temperature Range	T_{STG}	-65	+150	°C
Lead Temperature, Soldering (11 Seconds Max)	T_{LEAD}		240	°C
Shock			20	G
Vibration	50 G @ 2000 Hz Max			

(1) For operation above 87.5° C T case, derate @ 400 mW/ °C

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MICROPAC INDUSTRIES, INC. ● 905 E. WALNUT STREET GARLAND, TEXAS 75040 ● (214) 272-3571 ● FAX (214) 494-2281

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1.5 AMP POSITIVE VOLTAGE REGULATOR

SPECIFICATIONS

PARAMETER	SYMBOL	TEST CONDITIONS ($T_C = 25^\circ\text{C}$ Unless Otherwise Noted)	TEST LIMITS		UNITS
			MIN	MAX	
Output Voltage	V_O	$V_{IN} = V_O + 5V$ TO $V_O + 10V$ $I_O = 10\text{mA}$ TO $1.5A$	4.0	30.0	Volts
Input-Output Differential	$V_{IN} - V_O$	$T_C = -55$ TO 125°C	2.4		Volts
Output Current	I_O	$V_{IN} = V_O + 5V$	10mA	1.5	Amps
Line Regulation (1)	$REG_{(LINE)}$	$V_{IN} = V_O + 5$ TO $V_O + 15V$		2.0	% V_O
Load Regulation (1)	$REG_{(LOAD)}$	$V_{IN} = V_O + 5V$ $I_O = 10\text{mA}$ $\Delta I_O = 1000\text{ mA}$		0.6	% V_O
Quiescent Current	I_O	$V_{IN} = V_O + 5V$ $I_O = 10\text{mA}$		18	mA
Current Limit	I_{LIM}	$V_{IN} = V_O + 5V$		5.0	Amps
Temperature Coefficient	TC	$V_{IN} = V_O + 5V$ $T_C = -55$ TO 125°C $I_O = 100\text{ mA}$		0.02	% V_{OC}
Output Noise Voltage	V_N	$V_{IN} = V_O + 5V$ $T_C = -55$ TO 125°C $I_O = 100\text{ mA}$		10(2)	$\mu\text{V/V}$ RMS
Ripple Attenuation	R_A	$V_{IN} = 10V$ $T_C = -55$ TO 125°C	60 (3)		dB
Control Voltage	V_{CONT}	$V_{IN} = V_O + 5$ TO $V_O + 10V$ $T_C = 25^\circ\text{C}$ $I_O = 10\text{mA}$	3.6	4.0	Volts

- 1 - Instantaneous Regulation
- 2 - BW = 10HZ - 100 KHZ
- 3 - 1 Vrms, 120 HQ Input Ripple

OPERATIONAL DATA

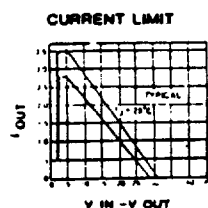
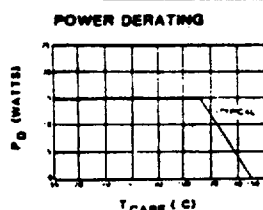
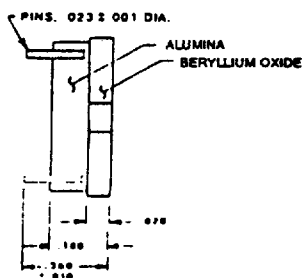
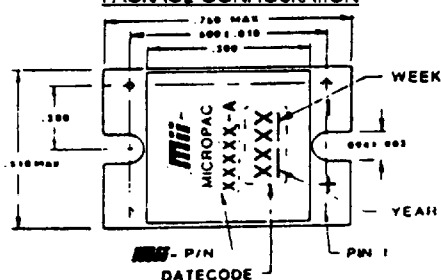


Fig. 1

PACKAGE CONFIGURATION



TYPICAL APPLICATIONS

1.5 AMP POSITIVE ADJUSTABLE
VOLTAGE REGULATOR

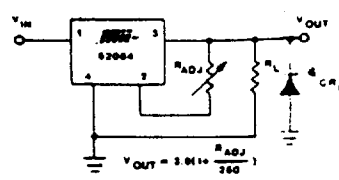


Fig. 3

* Add for reactive loads which may induce a negative voltage at the output

1.5 AMP POSITIVE ADJUSTABLE
CURRENT REGULATOR

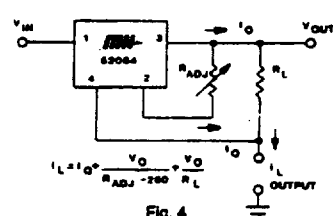


Fig. 4

1.5 AMP DUAL ADJUSTABLE VOLTAGE REGULATOR

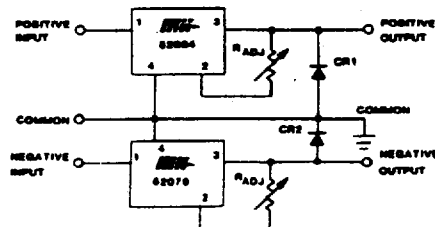


Fig. 5

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