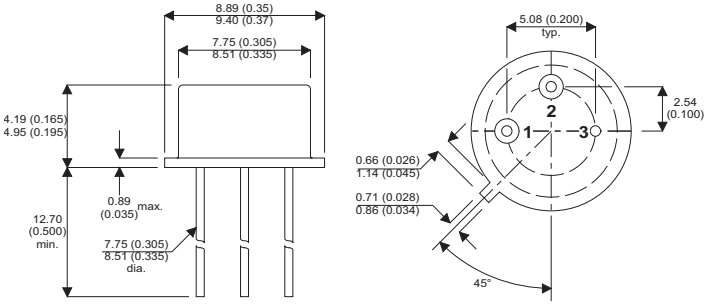
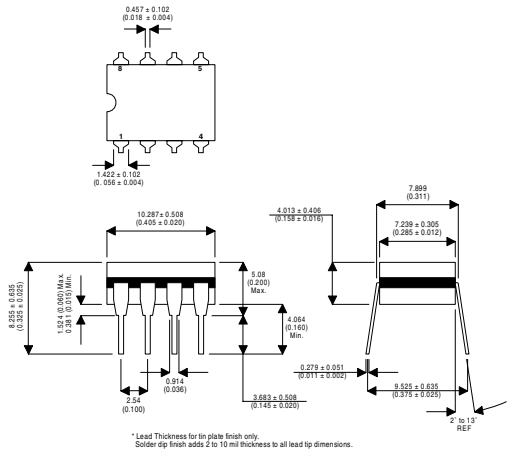
IP79M05AHX
IP79M05AJX

MECHANICAL DATA



H Package - TO-39 Metal

Pin 1 = Ground Pin 2 = Vout Pin 3 = Vin



J Package = 8 Pin Ceramic DIP

Pin 1 = Ground	Pin 5 = N/C
Pin 2 = N/C	Pin 6 = Vin
Pin 3 = N/C	Pin 7 = N/C
Pin 4 = Vout	Pin 8 = N/C

5 VOLT NEGATIVE VOLTAGE REGULATOR

FEATURES

- **0.01%/V LINE REGULATION**
- **0.3%/A LOAD REGULATION**
- **THERMAL OVERLOAD PROTECTION**
- **SHORT CIRCUIT PROTECTION**
- **SAFE OPERATING AREA PROTECTION**
- **1% OUTPUT VOLTAGE TOLERANCE**

DESCRIPTION

The IP79M05AHX and IP79M05AJX are 5V negative 1.5A Voltage Regulators providing 0.01% per Volt Line Regulator and 0.3% per amp load regulation.

Protection includes safe operating Area current limiting and thermal.

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_I	DC Input Voltage V_O = -5V	35V
P_D	Power Dissipation	Internally limited
T_j	Operating Junction Temperature Range	–55°C to +150°C
	Maximum Junction Temperature	150°C
T_{stg}	Storage Temperature Range	–65°C to +150°C
T_L	Lead Temperature (Soldering, 10 sec)	300°C

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ELECTRICAL CHARACTERISTICS (T_j = 25°C unless stated)

	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage*	I_O = 100mA V_{IN} = 10V	- 4.95	- 5	- 5.05	V
		I_O = 5mA to 350mA $P_D \le P_{MAX}$ T_j = –55 to +150°C	- 4.85 (V_{IN} = - 7.5 to - 20V)		- 5.15	
ΔV_O	Line Regulation*	I_O = 200mA		3 (V_{IN} = - 7 to - 25V)	10	mV
		I_O = 200mA T_j = –55 to +150°C		3 (V_{IN} = - 8 to - 25V)	10	
		I_O = 500mA		3 (V_{IN} = 8 to 12V)	10	
ΔV_O	Load Regulation*	I_O = 5mA to 500mA V_{IN} = 10V T_j = –55 to +150°C		5	50	mV
I_d	Quiescent Current*	I_O = 350mA V_{IN} = 10V T_j = –55 to +150°C		4	6	mA
ΔI_Q	Quiescent Current Change*	I_O = 5 to 500 mA V_{IN} = 10V T_j = –55 to +150°C		0.1	0.5	mA
		I_O = 200mA T_j = –55 to +150°C		0.2 (V_{IN} = - 8 to - 25V)	0.8	mA
V_N	Output Noise Voltage	f = 10Hz to 100kHz		40	200	µV
$\frac{\Delta V_{IN}}{\Delta V_O}$	Ripple Rejection	f = 120Hz I_O = 300mA	65	80 (V_{IN} = - 8 to - 18V)		dB
		f = 120Hz I_O = 100mA T_j = –55 to +150°C	65	80 (V_{IN} = - 8 to - 8V)		dB
	Dropout Voltage*	I_O = 350mA		2	2.5	V
I_{SC}	Short Circuit Current*	V_{IN} = 35V		600	1200	mA
I_{PK}	Peak Output Current*	V_{IN} = 10V	0.7	2.4	3.3	A
	Average Temperature Coefficient of Output Voltage*	I_O = 5mA		0.5	2.0	mV / °C

* Pulse Test: $t_p \le 10ms$, $\delta \le 5\%$.

All characteristics are measured with a capacitor across the input of 0.22µF and a capacitor across the output of 0.1µF.

Output Voltage changes due to changes in internal temperature must be taken into account separately.

Although power dissipation is internally limited, these specifications apply for up to 2W for the TO–39 package, and 1.05W for the CERDIP (J package).

THERMAL DATA

$R_{THj\text{-}case}$	Thermal Resistance Junction – Case	TO-39 (H Package)	20°C / W Typ.
$R_{THj\text{-}amb}$	Thermal Resistance Junction – Ambient	CERDIP (J Package)	120°C / W Typ.
	Derate above 25°C	CERDIP (J Package)	8.4 mW / °C

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