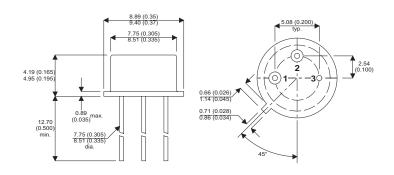


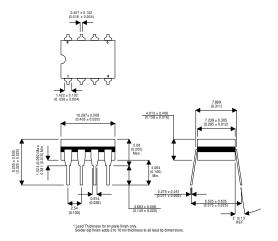
IP79M05AHX IP79M05AJX

MECHANICAL DATA



H Package - TO-39 Metal

Pin 1 = GroundPin 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)

$\overline{V_I}$	DC Input Voltage V _O = -5V	35V
P_{D}	Power Dissipation	Internally limited
T _i	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 _I	Lead Temperature (Soldering, 10 sec)	300°C

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Issue 1



IP79M05AHX IP79M05AJX

ELECTRICAL CHARACTERISTICS ($T_j = 25^{\circ}C$ unless stated)

Parameter	Test Conditions		Min.	Тур.	Max.	Unit	
	I _O = 100mA	V _{IN} = 10V	- 4.95	- 5	- 5.05		
Output Voltage*	$I_O = 5mA$ to $350mA$	$P_D \le P_{MAX}$	- 4.85		- 5.15		
	$T_j = -55 \text{ to } +150^{\circ}\text{C}$		(V _{IN} = -7.5 to - 20V)				
	,			3	10	-	
Line Regulation*	1 ₀ = 200111A		(V	$(V_{IN} = -7 \text{ to } -25V)$			
	I _O = 200mA			3	10	mV	
	$T_i = -55 \text{ to } +150^{\circ}\text{C}$		(V	' _{IN} = - 8 to - 25	SV)		
	,			3	10	-	
	1 ₀ = 500mA		($V_{IN} = 8 \text{ to } 12V_{IN}$	')		
Lood Degulation*	I _O = 5mA to 500mA	V _{IN} = 10V		Г	Γ0	\/	
Load Regulation	$T_i = -55 \text{ to } +150^{\circ}\text{C}$			5	50	mV	
Ovices and Ovigent*	I _O = 350mA	V _{IN} = 10V	4		А		
Quiescent Current [*]	$T_i = -55 \text{ to } +150^{\circ}\text{C}$			4	6	mA	
	I _O = 5 to 500 mA	V _{IN} = 10V		0.1	0.5	m A	
Quiescent Current Change*	$T_i = -55 \text{ to } +150^{\circ}\text{C}$		0.1		0.5	.5 mA	
	I _O = 200mA			0.2	8.0	0.8	
	$T_i = -55 \text{ to } +150^{\circ}\text{C}$		$(V_{IN} = -8 \text{ to } -25V)$		iV)	mA	
Output Noise Voltage	f = 10Hz to 100kHz			40	200	μV	
Ripple Rejection	f = 120Hz	I _O = 300mA	65	80		٩D	
			(V	' _{IN} = - 8 to - 18	SV)	dB	
	f = 120Hz	I _O = 100mA	65	80		٩D	
	$T_i = -55 \text{ to } +150^{\circ}\text{C}$		()	$I_{1N} = -8 \text{ to } -8$	V)	dB	
Dropout Voltage*	I _O = 350mA			2	2.5	V	
Short Circuit Current*	V _{IN} = 35V			600	1200	mA	
Peak Output Current*	V _{IN} = 10V		0.7	2.4	3.3	Α	
Average Temperature				0.5	0.0	mV	
Coefficient of Output Voltage*	1 ₀ = 5MA			0.5	2.0	/°C	
	Line Regulation* Load Regulation* Quiescent Current* Quiescent Current Change* Output Noise Voltage Ripple Rejection Dropout Voltage* Short Circuit Current* Peak Output Current* Average Temperature	$\begin{array}{c} \text{Output Voltage*} & \begin{array}{c} I_{O} = 5\text{mA to } 350\text{mA} \\ T_{j} = -55 \text{ to } +150^{\circ}\text{C} \end{array} \\ \\ I_{O} = 200\text{mA} \\ \\ I_{O} = 200\text{mA} \\ \\ I_{O} = 200\text{mA} \end{array} \\ \\ I_{O} = 500\text{mA} \end{array} \\ \\ \text{Load Regulation*} & \begin{array}{c} I_{O} = 5\text{mA to } 500\text{mA} \\ T_{j} = -55 \text{ to } +150^{\circ}\text{C} \end{array} \\ \\ \text{Quiescent Current*} & \begin{array}{c} I_{O} = 5\text{mA to } 500\text{mA} \\ T_{j} = -55 \text{ to } +150^{\circ}\text{C} \end{array} \\ \\ \text{Quiescent Current Change*} & \begin{array}{c} I_{O} = 350\text{mA} \\ T_{j} = -55 \text{ to } +150^{\circ}\text{C} \end{array} \\ \\ \text{Quiescent Current Change*} & \begin{array}{c} I_{O} = 5 \text{ to } 500\text{ mA} \\ T_{j} = -55 \text{ to } +150^{\circ}\text{C} \end{array} \\ \\ \text{Quiescent Current Change*} & \begin{array}{c} I_{O} = 200\text{mA} \\ T_{j} = -55 \text{ to } +150^{\circ}\text{C} \end{array} \\ \\ \text{Quiput Noise Voltage} & \begin{array}{c} f = 10\text{Hz} \text{ to } 100\text{kHz} \end{array} \\ \\ \text{F} = 120\text{Hz} \\ T_{j} = -55 \text{ to } +150^{\circ}\text{C} \end{array} \\ \\ \text{Popout Voltage*} & \begin{array}{c} I_{O} = 350\text{mA} \\ \text{Short Circuit Current*} \end{array} \\ \\ \text{V}_{IN} = 35\text{V} \\ \\ \text{Veak Output Current*} & \begin{array}{c} V_{IN} = 35\text{V} \\ V_{IN} = 10\text{V} \end{array} \\ \\ \text{Average Temperature} \\ \\ \end{array}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	

^{*} Pulse Test: $t_{\text{D}} \leq 10 \text{ms}$, $\delta \leq 5\%$.

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

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