

3-Terminal 100mA Negative Voltage Regulator

DESCRIPTION

The TS79L05CY of negative voltage regulators are inexpensive, easy-to-use devices suitable for a multitude of applications that require a regulated supply of up to 100mA. Like their higher power TS7905 and TS79M05 Series cousins, these regulators feature internal current limiting and thermal shutdown making them remarkably rugged. No external components are required with the TS79L05CY devices in many applications. These devices offer a substantial performance advantage over the traditional zener diode-resistor combination, as output impedance and quiescent current are substantially reduced.

FEATURES

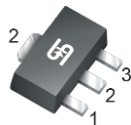
- Output Voltage Range -5V
- Output current up to 100mA
- Internal thermal overload protection
- Internal short-circuit current limiting
- Output transistor safe-area compensation
- Output voltage offered in 4% tolerance
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATION

- Switching power supply
- Home appliance



SOT-89

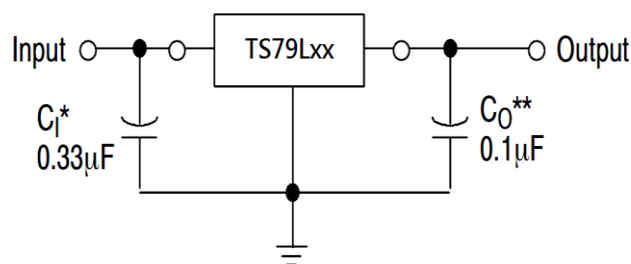


Pin Definition:

1. Ground
2. Input
3. Output

Notes: MSL 3 (Moisture Sensitivity Level) per J-STD-020

STANDARD APPLICATION CIRCUIT



A common ground is required between the input and the output voltages. The input voltage must remain typically 2.0V above the output voltage even during the low point on the Input ripple voltage.

XX = these two digits of the type number indicate voltage.

* = C_{in} is required if regulator is located an appreciable distance from power supply filter.

** = C_o is not needed for stability; however, it does improve transient response.

ABSOLUTE MAXIMUM RATINGS			
PARAMETER	SYMBOL	LIMIT	UNIT
DC Input Voltage	V_{IN}	-35	V
Power Dissipation	P_D	Internally Limited	W
Operating Temperature range	T_{OPR}	0 ~ +125	°C
Operating Junction Temperature Range	T_J	0 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction to Case Thermal Resistance	$R_{\theta JC}$	18	°C/W

Notes: Considering 6cm² of copper board heat-sink

ELECTRICAL SPECIFICATIONS TS79L05CY							
(V _{IN} =-10V, I _{OUT} =40mA, 0°C≤T _J ≤125°C, C _{IN} =0.33μF, C _{OUT} =0.1μF, unless otherwise noted)							
PARAMETER	CONDITIONS		SYMBOL	MIN	TYP	MAX	UNIT
Output voltage	T _J =25°C		V _{OUT}	-4.80	-5	-5.20	V
	-7.5V≤V _{IN} ≤-20V, 5mA≤I _{OUT} ≤100mA			-4.75	-5	-5.25	V
Line Regulation	T _J =25°C	-7.5V≤V _{IN} ≤-20V	REG _{LINE}	--	50	150	mV
Load Regulation	T _J =25°C	5mA≤I _{OUT} ≤100mA	REG _{LOAD}	--	20	60	mV
		5mA≤I _{OUT} ≤40mA		--	10	30	
Quiescent Current	I _{OUT} =0, T _J =25°C		I _Q	--	3	6	mA
Quiescent Current Change	-7.5V≤V _{IN} ≤-25V		ΔI _Q	--	--	1.5	mA
	5mA≤I _{OUT} ≤40mA			--	--	0.1	
Output Noise Voltage	10Hz≤f≤100kHz, T _J =25°C		V _N	--	40	--	μV
Ripple Rejection Ratio	f=120Hz, -8V≤V _{IN} ≤-18V		RR	41	49	--	dB
Voltage Drop	I _{OUT} =100mA, T _J =25°C		V _{DROP}	--	1.7	--	V
Peak Output Current	T _J =25°C		I _{o peak}	--	0.15	--	A
Temperature Coefficient of Output Voltage	I _{OUT} =5mA, 0°C≤T _J ≤125°C		ΔV _{OUT} /ΔT _J	--	-0.65	--	mV/°C

Note:

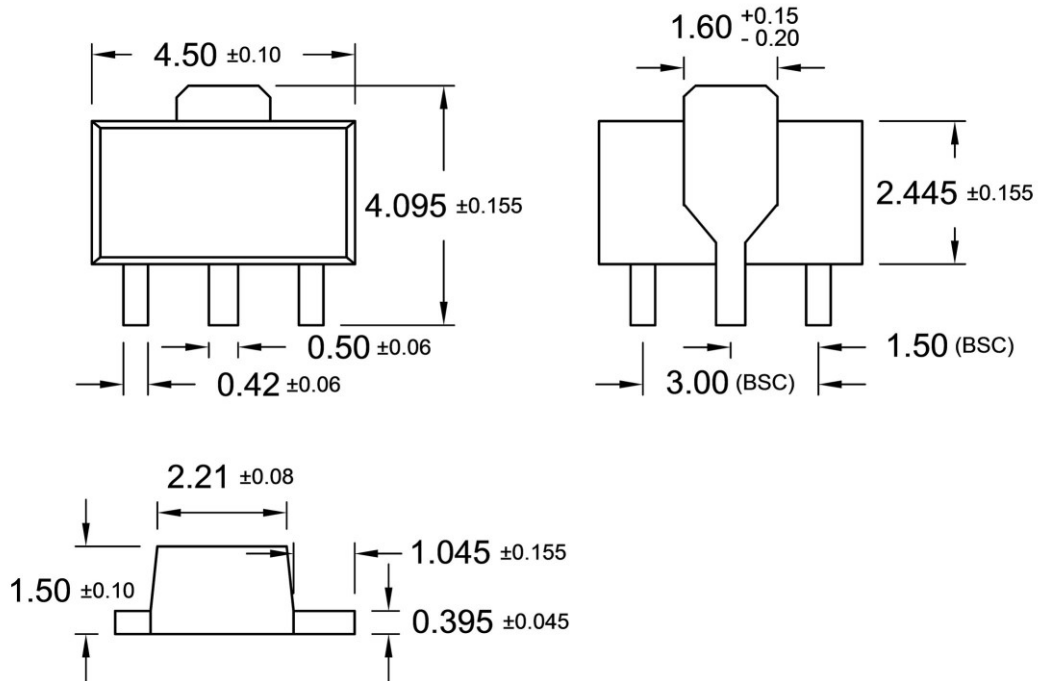
1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible, and thermal effects must be taken into account separately
2. This specification applies only for DC power dissipation permitted by absolute maximum ratings.

ORDERING INFORMATION

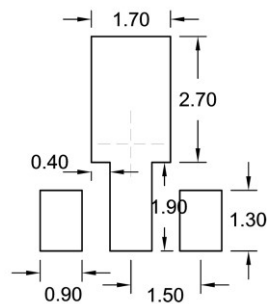
ORDERING CODE	PACKAGE	PACKING
TS79L05CY RMG	SOT-89	1,000pcs / 7" Reel

PACKAGE OUTLINE DIMENSIONS (Unit: Millimeters)

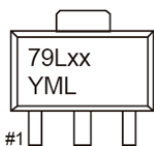
SOT-89



SUGGESTED PAD LAYOUT (Unit: Millimeters)



MARKING DIAGRAM



- XX** = Output Voltage (**05**=-5V)
- Y** = Year Code
- M** = Month Code for Halogen Free Product
 - O** =Jan **P** =Feb **Q** =Mar **R** =Apr
 - S** =May **T** =Jun **U** =Jul **V** =Aug
 - W** =Sep **X** =Oct **Y** =Nov **Z** =Dec
- L** = Lot Code

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Purchasers are solely responsible for the choice, selection, and use of TSC products and TSC assumes no liability for application assistance or the design of Purchasers' products.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Linear Voltage Regulators](#) category:

Click to view products by [Taiwan Semiconductor](#) manufacturer:

Other Similar products are found below :

[LV56831P-E](#) [LV5684PVD-XH](#) [MCDTSA6-2R](#) [L7815ACV-DG](#) [LV56801P-E](#) [TCR3DF13,LM\(CT](#) [TCR3DF39,LM\(CT](#) [TLE42794G](#)
[L78L05CZ/1SX](#) [L78LR05DL-MA-E](#) [LM317T](#) [636416C](#) [714954EB](#) [BA033LBSG2-TR](#) [LV5680P-E](#) [L78M15CV-DG](#) [L79M05T-E](#)
[TLS202A1MBVHTSA1](#) [L78LR05D-MA-E](#) [NCV317MBTG](#) [NTE7227](#) [LV5680NPVC-XH](#) [LT1054CN8](#) [ME6208A50M3G](#) [SL7533-8](#)
[ME6231A50M3G](#) [ME6231A50PG](#) [ME6231C50M5G](#) [AMS1117S-3.3](#) [AMS1117-5.0](#) [AMS1117S-5.0](#) [AMS1117-3.3](#) [MD5118](#) [MD5121](#)
[MD5127](#) [MD5128](#) [MD5130](#) [MD5144](#) [MD5150](#) [MD5112](#) [MD5115](#) [MD5125](#) [MD5136](#) [MD5140](#) [MD5110](#) [MD52E18WB6](#) [MD52E33WB6](#)
[MD52E15QA3](#) [MD52E21QA3](#) [MD52E25QA3](#)