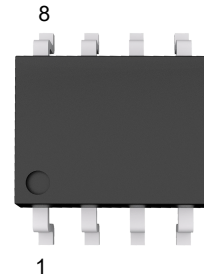


Features

3-Terminal Voltage Regulators

- Input voltage: up to 35V
- Output voltage: 5V
- Output current up to 100 mA, internal thermal overload protection and short-circuit current limiting.

SOP-8



1. VOUT 2. GND 3. GND 4. NC
5. NC 6. GND 7. GND 8. VIN

Marking Code : 78L05

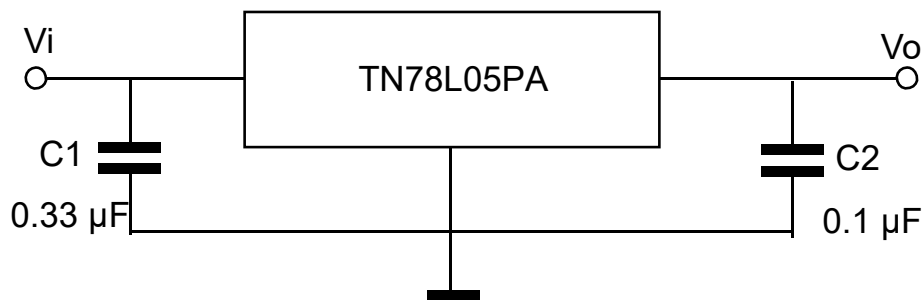
Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Input Voltage	V_I	35	V
Output Current	I_O	100	mA
Junction Temperature	T_J	150	°C
Operating Temperature Range	T_{OPR}	-40 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Test Circuit



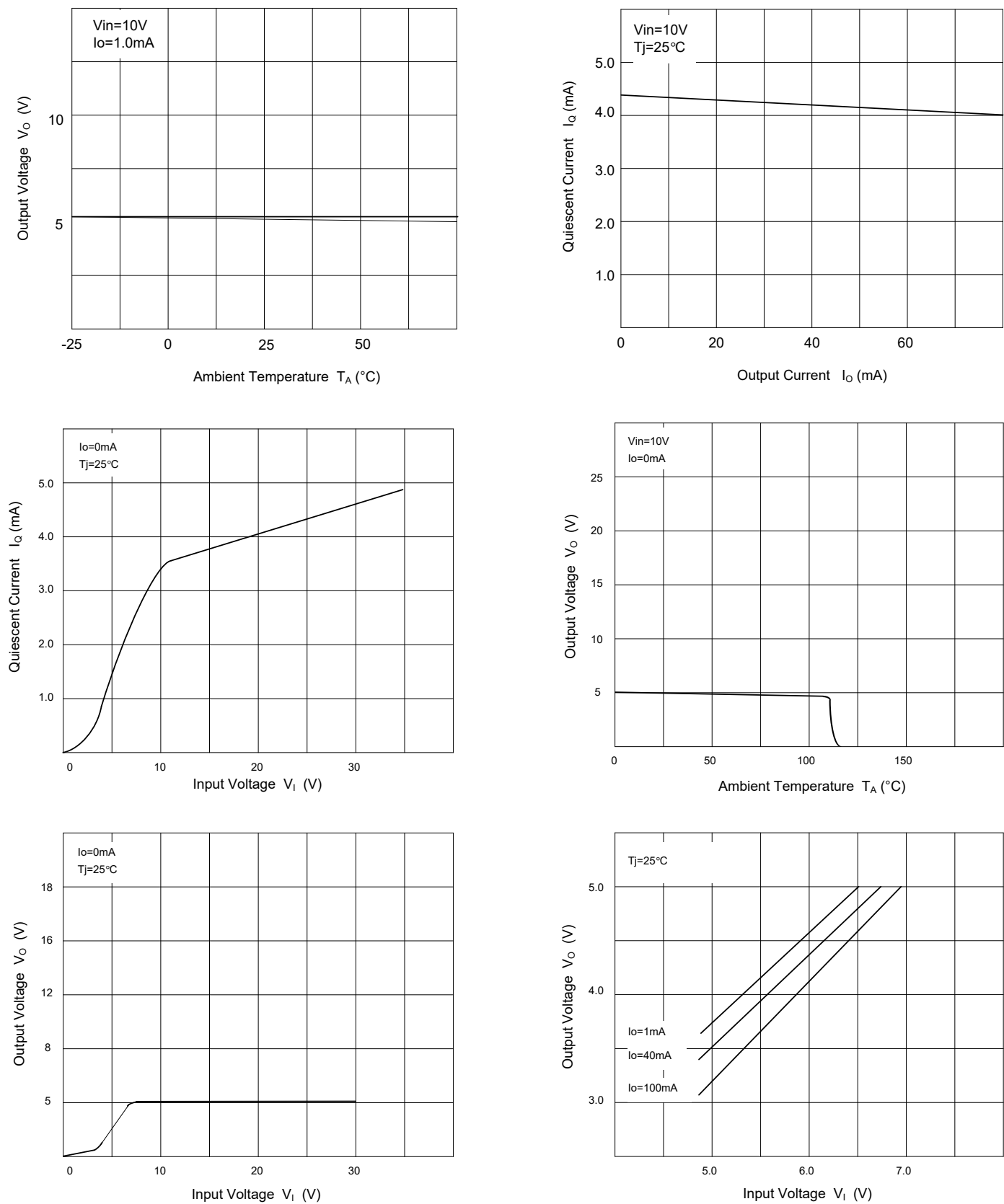
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Electrical Characteristics

Ratings at 0°C≤T_J≤125°C V_I=10V, I_O=40mA, C_I=0.33μF,C_O=0.1μF,unless otherwise specified.

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Output Voltage	V _O	T _J =25°C	4.80	5.0	5.2	V
		I _O =1mA to 40mA, V _I =7V to 20V	4.75	5.0	5.25	V
		I _O =1mA to 70mA,V _I =10V	4.75	5.0	5.25	V
Line Regulation	ΔV _O	V _I =7V to 20V, T _J =25°C	--	--	150	mV
		V _I =8V to 20V, T _J =25°C	--	--	100	mV
Load Regulation	ΔV _O	I _O =1mA to 100mA ,T _J =25°C	--	--	60	mV
		I _O =1mA to 40 mA, T _J =25°C	--	--	30	mV
Ripple Rejection	RR	V _I =8V to 20V, f=120Hz, T _J =25°C	40	49	--	dB
Dropout Voltage	V _D	T _J =25°C	--	1.7	--	V
Quiescent Current	I _Q		--	3.8	6	mA
Quiescent Current Change	ΔI _Q	V _I =8V to 20V	--	--	1.5	mA
		I _O =1mA to 40mA	--	--	0.1	mA
Output Noise Voltage	V _N	10Hz≤f≤100KHz, T _J =25°C	--	42	--	μV

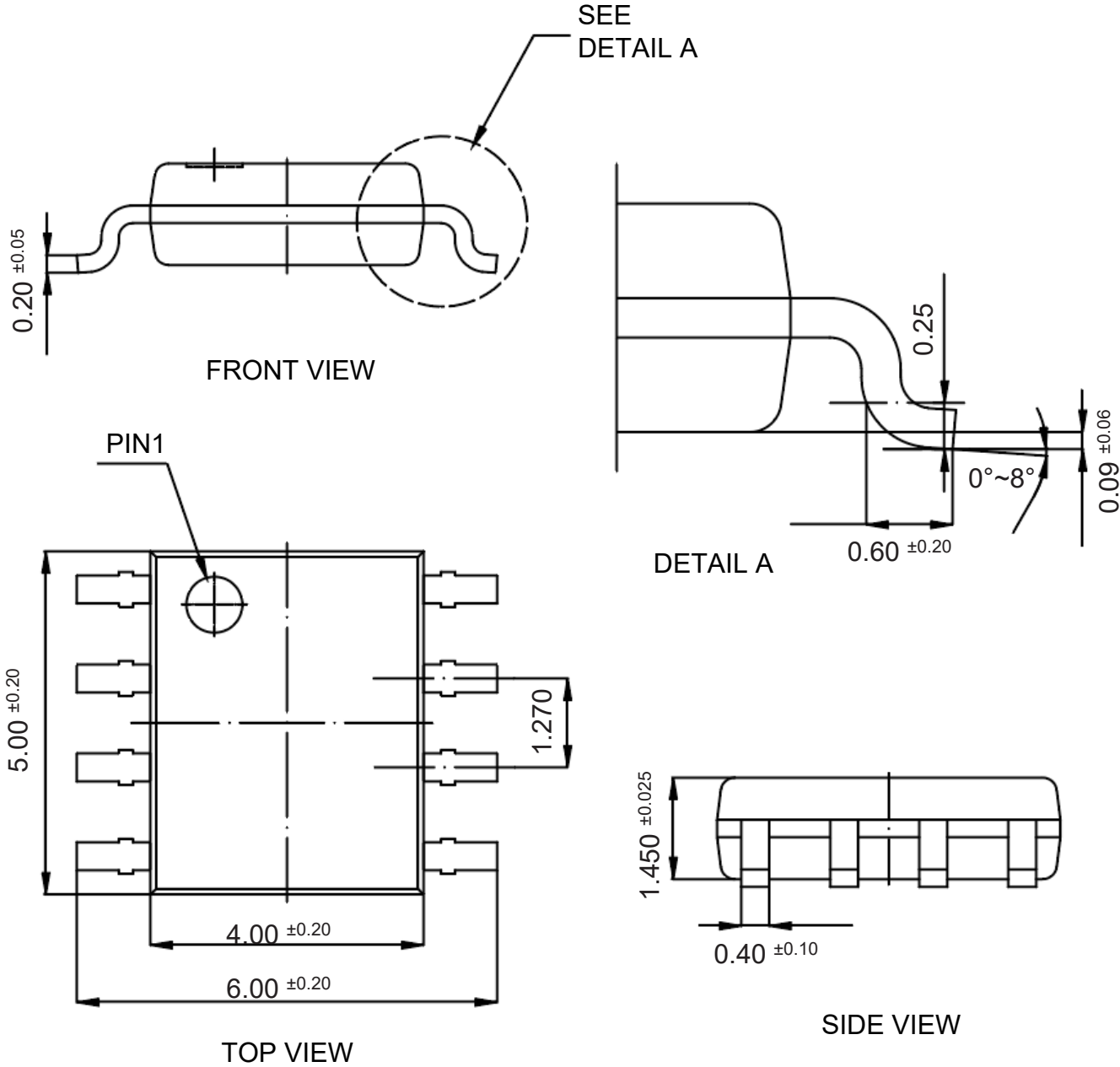
Typical Characteristic Curves



Package Outline

SOP-8

Dimensions in mm



Ordering Information

Device	Package	Shipping
TN78L05PA	SOP-8	4,000PCS/Reel&13inches

Contact Information

TANI website: <http://www.tanisemi.com> Email: tani@tanisemi.com

For additional information, please contact your local Sales Representative.

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Product Specification Statement

The product specification aims to provide users with a reference regarding various product parameters, performance, and usage. It presents certain aspects of the product's performance in graphical form and is intended solely for users to select product and make product comparisons, enabling users to better understand and evaluate the characteristics and advantages of the product. It does not constitute any commitment, warranty, or guarantee.

The product parameters described in the product specification are numerical values, characteristics, and functions obtained through actual testing or theoretical calculations of the product in an independent or ideal state. Due to the complexity of product applications and variations in test conditions and equipment, there may be slight fluctuations in parameter test values. TANI shall not guarantee that the actual performance of the product when installed in the customer's system or equipment will be entirely consistent with the product specification, especially concerning dynamic parameters. It is recommended that users consult with professionals for product selection and system design. Users should also thoroughly validate and assess whether the actual parameters and performance when installed in their respective systems or equipment meet their requirements or expectations. Additionally, users should exercise caution in verifying product compatibility issues, and TANI assumes no responsibility for the application of the product. TANI strives to provide accurate and up-to-date information to the best of our ability. However, due to technical, human, or other reasons, TANI cannot guarantee that the information provided in the product specification is entirely accurate and error-free. TANI shall not be held responsible for any losses or damages resulting from the use or reliance on any information in these product specifications.

TANI reserves the right to revise or update the product specification and the products at any time without prior notice, and the user's continued use of the product specification is considered an acceptance of these revisions and updates. Prior to purchasing and using the product, users should verify the above information with TANI to ensure that the product specification is the most current, effective, and complete. If users are particularly concerned about product parameters, please consult TANI in detail or request relevant product test reports. Any data not explicitly mentioned in the product specification shall be subject to separate agreement.

Users are advised to pay attention to the parameter limit values specified in the product specification and maintain a certain margin in design or application to ensure that the product does not exceed the parameter limit values defined in the product specification. This precaution should be taken to avoid exceeding one or more of the limit values, which may result in permanent irreversible damage to the product, ultimately affecting the quality and reliability of the system or equipment.

The design of the product is intended to meet civilian needs and is not guaranteed for use in harsh environments or precision equipment. It is not recommended for use in systems or equipment such as medical devices, aircraft, nuclear power, and similar systems, where failures in these systems or equipment could reasonably be expected to result in personal injury. TANI shall assume no responsibility for any consequences resulting from such usage.

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