

Product Overview

NCP785A: Linear Regulator, Ultra-Wide Input Voltage Range, 450 V, 10 mA



For complete documentation, see the data sheet.

The NCP785A is a high-performance >10mA linear regulator, offering a very wide operating input voltage range of up to 450 V DC operating and 700V DC maximum. It is an ideal choice for high input voltage applications such as industrial and home automation, smart metering, home appliances. The NCP785A offers $\pm 5\%$ of output voltage accuracy, extremely high power supply rejection ratio and ultra low quiescent current of typ. 15 μ A. The NCP785A is very well suited for harsh environmental conditions. The NCP785A is offered with fixed output voltages: 3.3 V, 5.0 V, 12 V, 15 V. SOT-89 package offers good thermal performance and very small PCB size.

Features

- Operating Input Voltage: Up to 450 VDC
- PSRR: 80 dB at 120 Hz
- Quiescent Current: 15 μ A Typical
- SOT89 Package

Applications

- Industrial, Home Automation, White Goods, Lighting
- Low-Power MCU Applications Power Supply
- Smaller Size, No-Load Efficient replacement for Capacitive Dropper

Benefits

- Allows for direct AC mains connection
- Effectively reduces the input ripple
- Greatly reduces the no-load power consumption
- Ideally suited for space constrained applications

End Products

- Circuit Breakers
- Smoke Sensors
- Home Appliances
- Smart Meters

Part Electrical Specifications

Product	Compliance	Status	Output	Polarity	V _O (V)	I _O Typ (A)	V _I Min (V)	V _I Max (V)	V _{DO} Typ (V)	I _Q Typ (mA)	PSRR (dB)	Noise (μ V _{rms})	Enable	Power Good	Package Type
NCP785AH120T1G	Pb-free	Active	Single	Positive	12	0.01	25	700		0.016	80	250	No	No	SOT-89-3
	Halide free														
NCP785AH150T1G	Pb-free	Active	Single	Positive	15	0.01	25	700		0.018	80	250	No	No	SOT-89-3
	Halide free														
NCP785AH33T1G	Pb-free	Active	Single	Positive	3.3	0.01	25	700		0.08	80	250	No	No	SOT-89-3
	Halide free														
NCP785AH50T1G	Pb-free	Active	Single	Positive	5	0.01	25	700		0.015	80	250	No	No	SOT-89-3
	Halide free														

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