Product Overview

NCP703: Voltage Regulator, LDO, Ultra Low Noise, Ultra Low Iq, 300 mA

For complete documentation, see the data sheet

Product Description

The NCP703 is one of the best in class regulators for providing both low noise performance (PSRR of 68 dB and noise levels typically < 13 uVrms) and a low quiescent operating current (< 12 uA), thanks to its BiCMOS process technology. In contrast to the tradeoff of noise vs. consumption found in some CMOS products, the NCP703 does not compromise, making it an ideal device for use with image sensors in cell phones and for noise sensitive circuits in other battery products. With output voltages as low as 0.8V, the NCP703 requires only 180 mV across the input and output. It is available in TSOP5 and XDFN 1.5x1.5mm packages.

Features	Benefits
• Operating Input Voltage Range: 2.0V to 5.5V	• Well suited for battery powered applications
• Ultra-Low Output Noise: Typ. 13 uVrms from 100Hz to 100kHz	• Very well suited for noise sensitive applications
• Ultra-Low No-Load Ground Current of Typ. 12 uA	• Improved efficiency during ligh-load conditions
• Adaptive Ground Current Feature	• Improved dynamic performance
• Available Fixed Output Voltage Options: 0.8V to 3.5V	• Sub-bandgap output voltages avaliable
• Output voltage trimming step: 2.5mV	• Output voltage can be trimmed precisely according to specific customer needs
• Enable/Shutdown Pin Function	• Allows applications to turn ON/OFF the Regulator using logic I/O signal
• Active Output Discharge	• Fast Output Voltage Turn-off
• Ouput Short Circuit and Current Limit Protection	• Assures robust design
• Thermal Shutdown Protection	• Protects the IC from overheating

Applications	End Products
• High-Frequency Precision Clock Supplies	• Smartphones
• PLL, VCO, TCXO Power Supplies	• Digital Cameras
• GPS Receiver Section Supply	• Tablets
• WLAN Tranceiver Power	• Portable DVD/Media Player
• Touchscreen Controller Supply	• Wireless Headset

Part Electrical Specifications

Product	Compliance	Status	Output	Polarity	V_O (V)	I_O Typ (A)	V_I Max (V)	V_{DO} Typ (V)	I_q Typ (mA)	PSRR (dB)	Noise (μV_{rms})	Package Type
NCP703MX18TCG	Pb-free Halide free	Active	Single	Positive	1.8	0.3	5.5		0.012	68	13	XDFN-6
NCP703MX28TCG	Pb-free Halide free	Active	Single	Positive	2.8	0.3	5.5	0.18	0.012	68	13	XDFN-6
NCP703MX30TCG	Pb-free Halide free	Active	Single	Positive	3	0.3	5.5		0.012	68	13	XDFN-6
NCP703MX33TCG	Pb-free Halide free	Active	Single	Positive	3.3	0.3	5.5		0.012	68	13	XDFN-6
NCP703SN18T1G	Pb-free Halide free	Active	Single	Positive	1.8	0.3	5.5		0.012	68	13	TSOP-5 / SOT-23-5
NCP703SN19T1G	Pb-free Halide free	Active	Single	Positive	1.9	0.3	5.5		0.012	68	13	TSOP-5 / SOT-23-5
NCP703SN28T1G	Pb-free Halide free	Active	Single	Positive	2.8	0.3	5.5	0.18	0.012	68	13	TSOP-5 / SOT-23-5
NCP703SN30T1G	Pb-free Halide free	Active	Single	Positive	3	0.3	5.5		0.012	68	13	TSOP-5 / SOT-23-5
NCP703SN33T1G	Pb-free Halide free	Active	Single	Positive	3.3	0.3	5.5		0.012	68	13	TSOP-5 / SOT-23-5
NCP703SN35T1G	Pb-free Halide free	Active	Single	Positive	3.5	0.3	5.5		0.012	68	13	TSOP-5 / SOT-23-5

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