

Product Overview

NCP163: LDO Regulator, 250 mA, Ultra-High PSRR, Ultra-Low Noise

For complete documentation, see the data sheet.



The NCP163 is an LDO (Low Dropout Regulator) capable of supplying 250 mA output current. Designed to meet the requirements of RF and analog circuits, the NCP163 device provides low noise, high PSRR, low quiescent current, and very good load/line transients. The device is designed to work with a 1 μ F input and a 1 μ F output ceramic capacitor. It is available in two thickness ultra-small 0.35P, 0.65 mm x 0.65 mm Chip Scale Package (CSP), XDFN-4 0.65P, 1 mm x 1 mm and in TSOP5 packages

Similar Products:

	NCP160	NCP161	NCP163	NCP167
Output Current (A)	0.25	0.45	0.25	0.70
PSRR $f=1$ kHz (dB)	98	98	92	85
Dropout Voltage (V)	0.080	0.150	0.080	0.210

Features

- Ultra High PSRR 92dB at 1 kHz, 60dB at 100 kHz
- Ultra Low Output Noise 6.5 μ VRMS
- Ultra Low Quiescent current 12 μ A
- Operating Input Voltage Range 2.2V to 5.5V
- Very Low Dropout 80mV at 250mA
- Available in 0.64mm x 0.64 mm CSP4 0.35P and 1mm x 1mm XDFN4 0.65P Packages
- Available in TSOP5 Package

Applications

- A/D and D/A Converters Power supply
- Audio codec
- Battery Powered Equipment
- Camera module
- Precision Analog Circuits

Benefits

- Excellent for power sensitive device like Wi-Fi module
- Very well suited for noise sensitive application
- Improved efficiency during light load conditions
- Suitable for battery powered device
- Low power dissipation at full load
- Great for space constraint application
- Suitable for applications requiring leaded package

End Products

- Cameras and camcoders
- Smartphones
- Tablets
- Wireless Routers

Part Electrical Specifications

Product	Pricing (\$/Unit)	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)	PSR R (dB)	Noise (μV _{rms})	Enable	Power Good	Application	Package Type
NCP163AFCS120T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.2	0.25	2.2	5.5		0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCS180T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.8	0.25	2.2	5.5	0.18	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCS250T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.5	0.25	2.2	5.5	0.11	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCS260T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.6	0.25	2.2	5.5	0.11	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCS270T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.7	0.25	2.2	5.5	0.1	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCS280T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.8	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCS285T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.85	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCS290T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.9	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCS2925T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.925	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCT120T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.2	0.25	2.2	5.5		0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCT180T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.8	0.25	2.2	5.5	0.18	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCT250T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.5	0.25	2.2	5.5	0.11	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCT260T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.6	0.25	2.2	5.5	0.11	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCT270T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.7	0.25	2.2	5.5	0.1	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCT280T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.8	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	WLCSP-4
NCP163AFCT285T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.85	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	WLCSP-4

NCP163AFCT290T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.9	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	WLC SP-4
NCP163AFCT2925T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.925	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	WLC SP-4
NCP163AFCT300T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	3	0.25	2.2	5.5	0.09	0.012	92	6.5	Yes	No	Consumer	WLC SP-4
NCP163AFCT330T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	3.3	0.25	2.2	5.5	0.08	0.012	92	6.5	Yes	No	Consumer	WLC SP-4
NCP163AMX120TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.2	0.25	2.2	5.5		0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX130TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.3	0.25	2.2	5.5		0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX150TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.5	0.25	2.2	5.5		0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX180TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.8	0.25	2.2	5.5	0.18	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX1825TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.825	0.25	2.2	5.5	0.18	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX190TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.9	0.25	2.2	5.5	0.175	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX250TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.5	0.25	2.2	5.5	0.11	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX260TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.6	0.25	2.2	5.5	0.105	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX270TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.7	0.25	2.2	5.5	0.1	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX275TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.75	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX280TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.8	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX285TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.85	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX290TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.9	0.25	2.2	5.5	0.9	0.012	92	6.5	Yes	No	Consumer	XDF N-4

NCP163AMX300TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	3	0.25	2.2	5.5	0.09	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX330TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	3.3	0.25	2.2	5.5	0.08	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163AMX500TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	5	0.25	2.2	5.5	0.075	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163ASN150T1G	0.1433	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.5	0.25	2.2	5.5		0.012	92	6.5	Yes	No	Consumer	SOT- 23-5
NCP163ASN180T1G	0.1433	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.8	0.25	2.2	5.5	0.18	0.012	92	6.5	Yes	No	Consumer	SOT- 23-5
NCP163ASN250T1G	0.1433	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.5	0.25	2.2	5.5	0.11	0.012	92	6.5	Yes	No	Consumer	SOT- 23-5
NCP163ASN270T1G	0.1433	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.7	0.25	2.2	5.5	0.1	0.012	92	6.5	Yes	No	Consumer	SOT- 23-5
NCP163ASN280T1G	0.1433	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.8	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	SOT- 23-5
NCP163ASN300T1G	0.1433	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	3	0.25	2.2	5.5	0.09	0.012	92	6.5	Yes	No	Consumer	SOT- 23-5
NCP163ASN330T1G	0.1433	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	3.3	0.25	2.2	5.5	0.08	0.012	92	6.5	Yes	No	Consumer	SOT- 23-5
NCP163ASN500T1G	0.1433	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	5	0.25	2.2	5.5	0.075	0.012	92	6.5	Yes	No	Consumer	SOT- 23-5
NCP163BFCS180T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.8	0.25	2.2	5.5	0.18	0.012	92	6.5	Yes	No	Consumer	WLC SP-4
NCP163BFCS2925T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.925	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	WLC SP-4
NCP163BFCT180T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.8	0.25	2.2	5.5	0.18	0.012	92	6.5	Yes	No	Consumer	WLC SP-4
NCP163BFCT2925T2G	0.1113	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.925	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	WLC SP-4
NCP163BMX180TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.8	0.25	2.2	5.5	0.18	0.012	92	6.5	Yes	No	Consumer	XDF N-4
NCP163BMX1825TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	1.825	0.25	2.2	5.5	0.18	0.012	92	6.5	Yes	No	Consumer	XDF N-4

NCP163BMX275TBG	0.1144	Pb-free Halide free non AEC-Q and PPAP	Active	Single	Positive	2.75	0.25	2.2	5.5	0.095	0.012	92	6.5	Yes	No	Consumer	XDF N-4
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