NUF4401MN

Advance Information

EMI Filter with ESD Protection

NUF4401MN is a 4 line EMI filter array for wireless applications. It offers greater than −35 dB attenuation at frequencies from 900 MHz to 2.2 GHz. This device also offers ESD protection−clamping transients from static discharges and ESD protection is provided across all capacitors.

Features

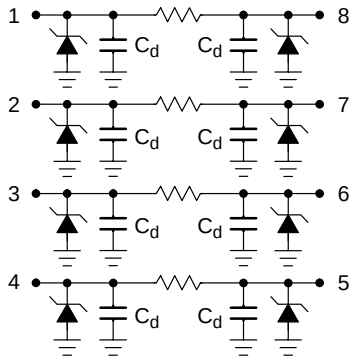
- Provides EMI Filtering and ESD Protection
- Integration of 12 Discretes
- Compliance with IEC61000−4−2 (Level 4)
  - 8 kV (Contact)
  - 15 kV (Air)
- DFN8, 2x2 mm Package
- Moisture Sensitivity Level 1
- ESD Ratings: Machine Model = C
  Human Body Model = 3B

Applications

- EMI Filtering and ESD Protection on a Data Line
- Wireless Phones
- Handheld Products
- Notebook Computers
- LCD Displays

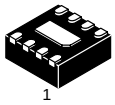
ON Semiconductor®

http://onsemi.com

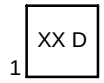


(Top View)

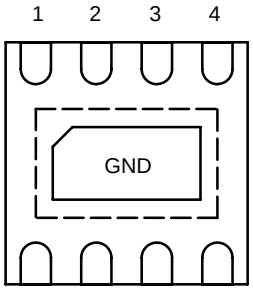
MARKING DIAGRAM



DFN8
CASE 506AA
PLASTIC



XX = Specific Device Code
D = Date Code



(Bottom View)

ORDERING INFORMATION

Device	Package	Shipping†
NUF4401MNT1	DFN8	2500 Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

This document contains information on a new product. Specifications and information herein are subject to change without notice.

MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
ESD Discharge IEC61000−4−2 Air Discharge Contact Discharge	V_{PP}	 15 8	kV
Steady−State Power per Resistor	P_R	100	mW
Steady−State Power per Package	P_T	400	mW
Operating Temperature Range	T_{OP}	−40 to 85	°C
Storage Temperature Range	T_{stg}	−55 to 150	°C
Maximum Lead Temperature for Soldering Purposes (1.8 in from case for 10 s)	T_L	260	°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Maximum Reverse Working Voltage		V_{RWM}			5.0	V
Breakdown Voltage	I_R = 1.0 mA	V_{BR}	6.0	7.0	8.0	V
Leakage Current	V_{RM} = 3.0 V	I_R			0.1	μA
Resistance		R_A	180	200	220	Ω
Capacitance (Note 1, 3)		C_d		15	20	pF
Cut−Off Frequency (Note 2)	Above this frequency, appreciable attenuation occurs	f_{3dB}		100		MHz

1. Measured at 25°C, V_R = 2.5 V, f = 1.0 MHz.
2. 50 Ω source and 50 Ω load termination.
3. Total line capacitance is 2 times the diode capacitance (C_d).

TYPICAL PERFORMANCE CURVES

(T_A = 25°C unless otherwise specified)

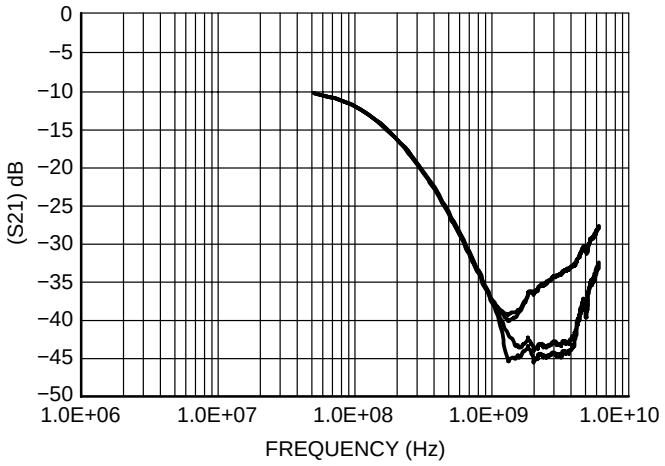


Figure 1. Insertion Loss Characteristics

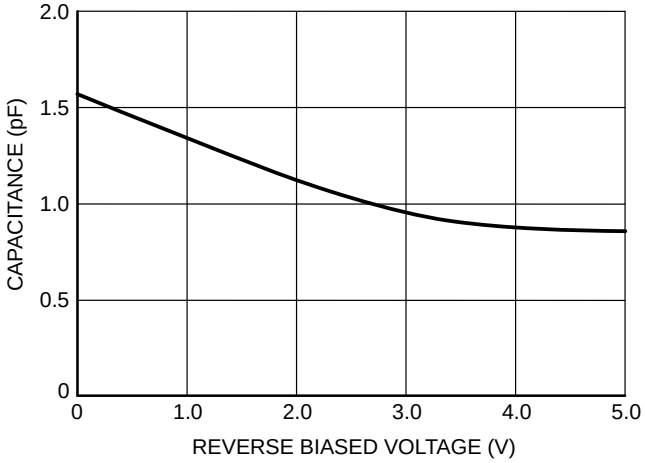


Figure 2. Typical Line Capacitance vs. Reverse Bias Voltage (normalized to capacitance @ 2.5 V)

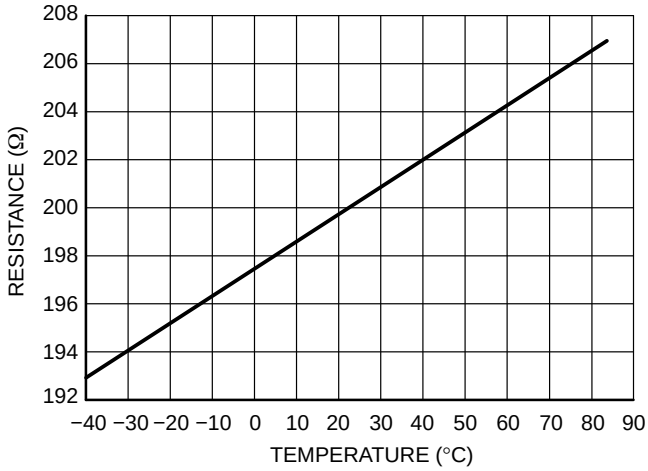
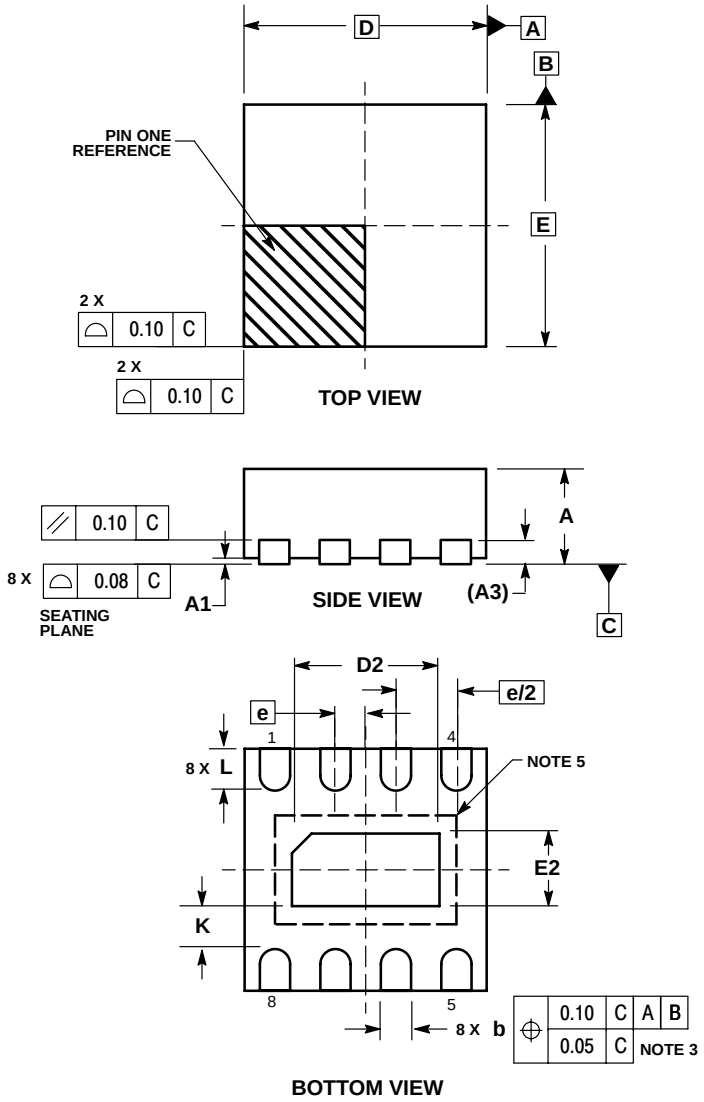


Figure 3. Typical Resistance vs. Temperature

NUF4401MN

PACKAGE DIMENSIONS

DFN8
CASE 506AA−01
ISSUE A



NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994 .
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSION b APPLIES TO PLATED TERMINAL AND IS MEASURED BETWEEN 0.25 AND 0.30 MM FROM TERMINAL.
4. COPLANARITY APPLIES TO THE EXPOSED PAD AS WELL AS THE TERMINALS.
5. INTERNAL PAD SIZE: 1.5 X 0.9 MM.

	MILLIMETERS	
DIM	MIN	MAX
A	0.80	1.00
A1	0.00	0.05
A3	0.20 REF	
b	0.20	0.30
D	2.00 BSC	
D2	1.10	1.30
E	2.00 BSC	
E2	0.50	0.70
e	0.50 BSC	
K	0.20	−−−
L	0.25	0.45

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
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