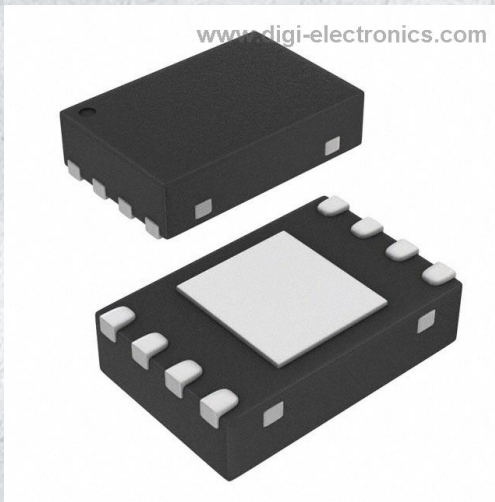


NUF2116MNT1G Datasheet



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	NUF2116MNT1G-DG
Manufacturer	onsemi
Manufacturer Product Number	NUF2116MNT1G
Description	FILTER RC(PI) 64 OHM/50PF SMD
Detailed Description	RC (Pi) EMI Filter 2nd Order Low Pass 2 Channel R = 64Ohms, C = 50pF 8-VDFN Exposed Pad



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

NUF2116MNT1G

Series:

-

Type:

Low Pass

Technology:

RC (Pi)

Center / Cutoff Frequency:

55MHz (Cutoff)

Resistance - Channel (Ohms):

64

ESD Protection:

Yes

Applications:

Audio

Mounting Type:

Surface Mount

Size / Dimension:

0.079" L x 0.079" W (2.00mm x 2.00mm)

Base Product Number:

NUF2116

Manufacturer:

onsemi

Product Status:

Obsolete

Filter Order:

2nd

Number of Channels:

2

Attenuation Value:

-35dB @ 800MHz ~ 3GHz

Values:

R = 64Ohms, C = 50pF

Operating Temperature:

-40°C ~ 85°C

Voltage - Rated:

-

Package / Case:

8-VDFN Exposed Pad

Height:

0.039" (1.00mm)

Environmental & Export classification

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

REACH Status:

REACH Unaffected

HTSUS:

8548.00.0000

NUF2116MN

2 Line Audio EMI Filter with ESD Protection

This device is a 2 line audio EMI filter array designed for speaker applications. It offers greater than -35 dB attenuation at frequencies from 800 MHz to 3.0 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 10 Discretes
- Compliance with IEC61000-4-2 (Level 4)
30 kV (Contact)
- DFN8, 2x2 mm Package
- Moisture Sensitivity Level 1
- ESD Ratings: Machine Model = C
Human Body Model = 3B
- Matching Series Impedances for Speaker Applications
- This is a Pb-Free Device

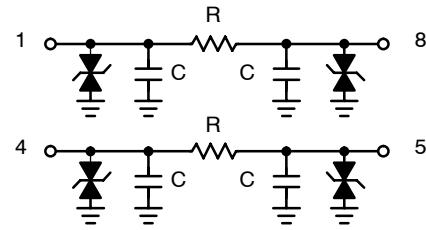
Applications

- Wireless Phones
- MP3s
- PDAs
- Digital Cameras
- Portable DVDs



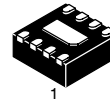
ON Semiconductor®

<http://onsemi.com>



(Top View)

MARKING DIAGRAM



DFN8
CASE 506AA



U6 = Specific Device Code

M̄ = Date Code

▪ = Pb-Free Package

(Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping†
NUF2116MNT1G	DFN8 (Pb-Free)	3000 / 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.

*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

NUF2116MN**MAXIMUM RATINGS**

Parameter	Symbol	Value	Unit
ESD Discharge IEC61000-4-2 Contact Discharge	V_{PP}	30	kV
Steady-State Power per Resistor @ 25°C	P_R	180	mW
Steady-State Power per Package @ 25°C	P_T	360	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

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Maximum Reverse Working Voltage		V_{RWM}	-	-	12	V
Breakdown Voltage	$I_R = 1.0 \text{ mA}$	V_{BR}	13.7	15.7	17.7	V
Leakage Current	$V_{RWM} = 12 \text{ V}$	I_R	-	-	0.1	μA
Resistance	$I_F = 40 \text{ mA}$	R	53	64	75	Ω
Capacitance per Diode (Notes 1, 3)		C_d	42	50	55	pF
Cut-Off Frequency (Note 2)	Above this frequency, appreciable attenuation occurs	f_{3dB}		55		MHz

1. Measured at 25°C, $V_R = 0 \text{ V}$, $f = 1.0 \text{ MHz}$.
2. 50 Ω source and 50 Ω load termination.
3. Total line capacitance is 2 times the diode capacitance (C_d).

NUF2116MN

TYPICAL PERFORMANCE CURVES

($T_A = 25^\circ\text{C}$ unless otherwise specified)

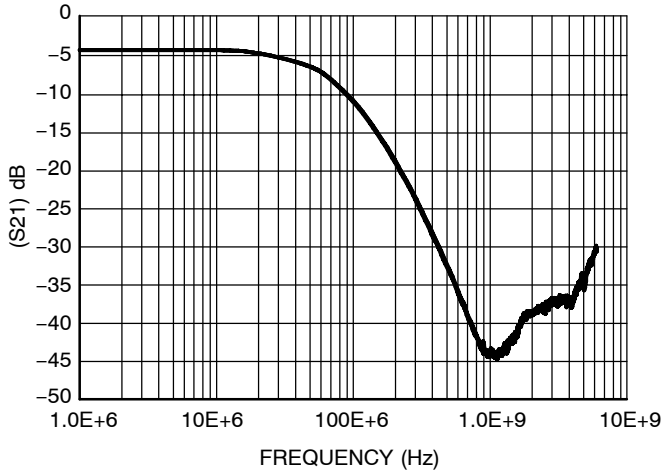


Figure 1. Insertion Loss Characteristics

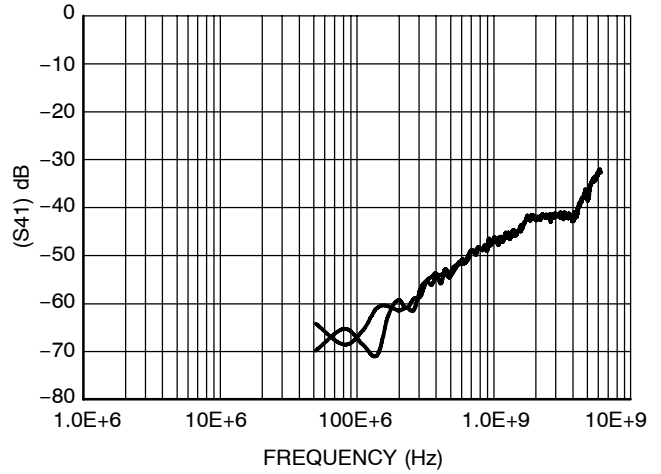


Figure 2. Analog Cross-Talk

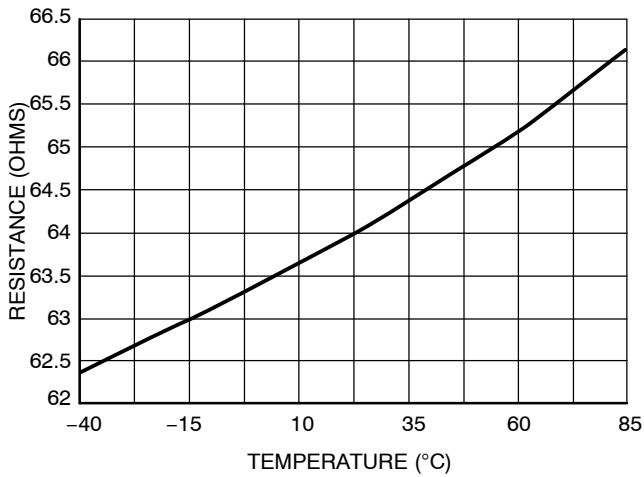


Figure 3. Typical Resistance over Temperature

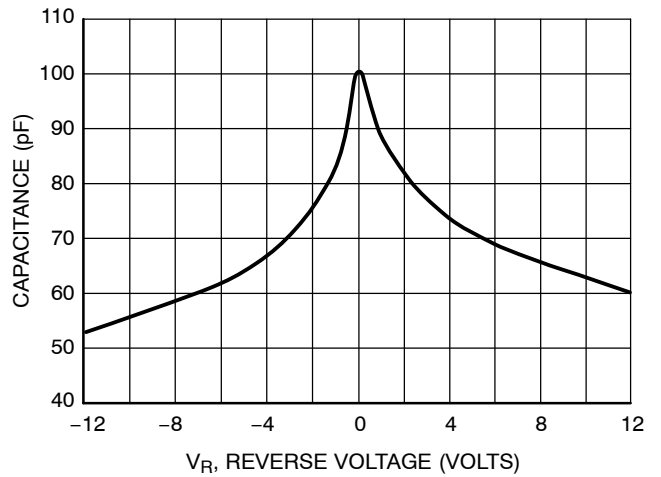
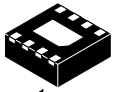


Figure 4. Typical Line Capacitance over Reverse Voltage



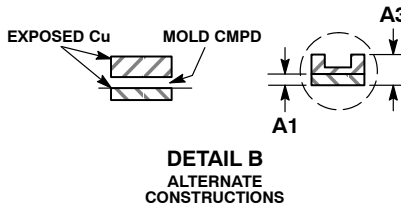
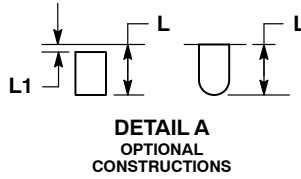
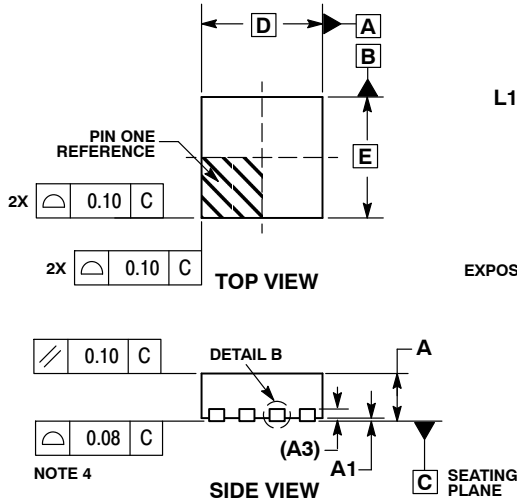
**MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS**



SCALE 4:1

DFN8 2x2, 0.5P
CASE 506AA
ISSUE F

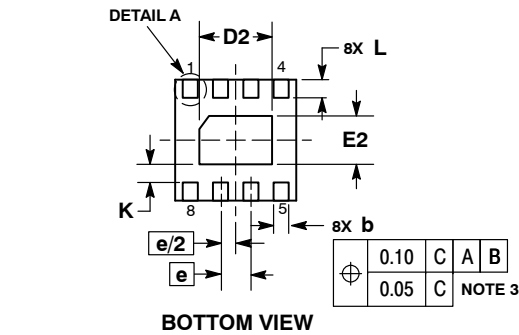
DATE 04 MAY 2016



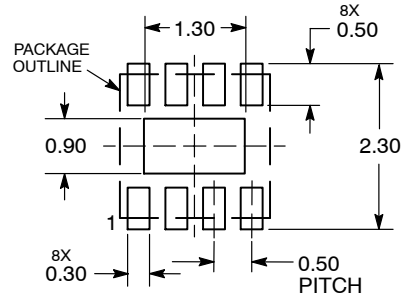
NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994 .
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSION b APPLIES TO PLATED TERMINAL AND IS MEASURED BETWEEN 0.15 AND 0.20 MM FROM TERMINAL TIP.
4. COPLANARITY APPLIES TO THE EXPOSED PAD AS WELL AS THE TERMINALS.

DIM	MILLIMETERS	
	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	0.70	0.90
e	0.50 BSC	
K	0.30 REF	
L	0.25	0.35
L1	---	0.10

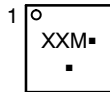


**RECOMMENDED
SOLDERING FOOTPRINT***



DIMENSIONS: MILLIMETERS

**GENERIC
MARKING DIAGRAM***



- XX = Specific Device Code
- M = Date Code
- = Pb-Free Device

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.

*For additional information on our Pb-Free strategy and soldering details, please download the **onsemi** Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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DESCRIPTION:	DFN8, 2.0X2.0, 0.5MM PITCH	PAGE 1 OF 1

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