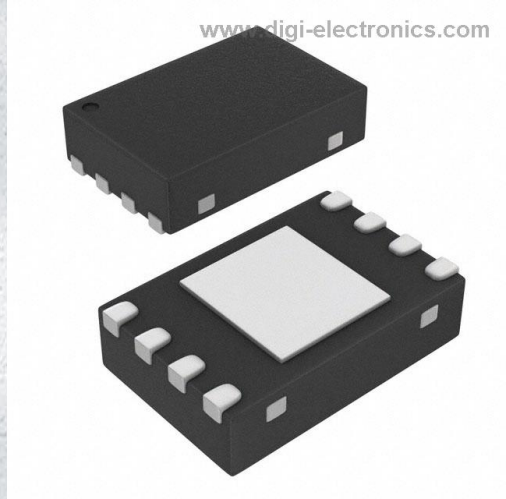
NUF2116MNT1G Datasheet



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-VFDFN Exposed Pad

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
NUF2116MNT1G	onsemi
Series:	Product Status:
-	Obsolete
Type:	Filter Order:
Low Pass	2nd
Technology:	Number of Channels:
RC (Pi)	2
Center / Cutoff Frequency:	Attenuation Value:
55MHz (Cutoff)	-35dB @ 800MHz ~ 3GHz
Resistance - Channel (Ohms):	Values:
64	R = 64Ohms, C = 50pF
ESD Protection:	Operating Temperature:
Yes	-40°C ~ 85°C
Applications:	Voltage - Rated:
Audio	-
Mounting Type:	Package / Case:
Surface Mount	8-VFDFN Exposed Pad
Size / Dimension:	Height:
0.079" L x 0.079" W (2.00mm x 2.00mm)	0.039" (1.00mm)
Base Product Number:	
NUF2116	

Environmental & Export classification

Moisture Sensitivity Level (MSL):	REACH Status:
1 (Unlimited)	REACH Unaffected
ECCN:	HTSUS:
EAR99	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

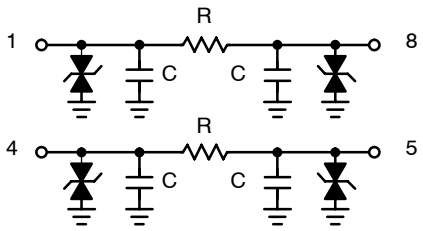
- Provides EMI Filtering and ESD Protection
- Integration of 10 Discretes
- Compliance with IEC61000−4−2 (Level 4)
  30 kV (Contact)
- DFN8, 2x2 mm Package
- Moisture Sensitivity Level 1
- ESD Ratings: Machine Model = C
  Human Body Model = 3B
- Matching Series Impedances for Speaker Applications
- This is a Pb−Free Device

Applications

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

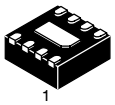
ON Semiconductor®

http://onsemi.com

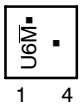


(Top View)

MARKING DIAGRAM



DFN8
CASE 506AA



U6 = Specific Device Code
M = 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°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 mA	V_{BR}	13.7	15.7	17.7	V
Leakage Current	V_{RWM} = 12 V	I_R	–	–	0.1	μA
Resistance	I_F = 40 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 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)

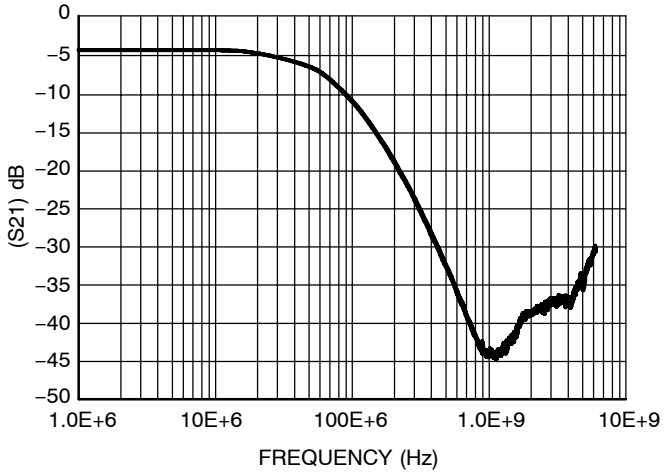


Figure 1. Insertion Loss Characteristics

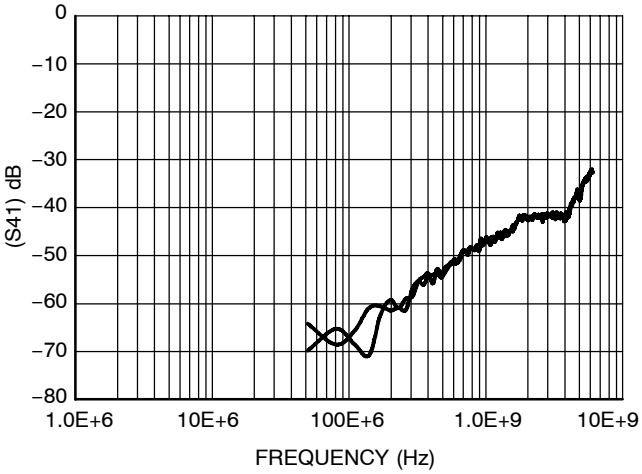


Figure 2. Analog Cross−Talk

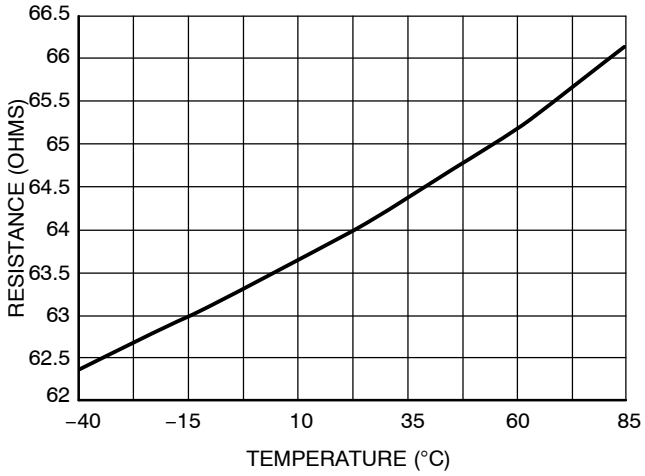


Figure 3. Typical Resistance over Temperature

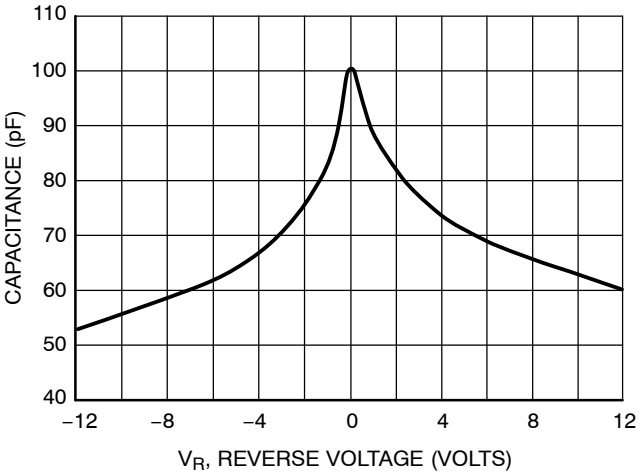
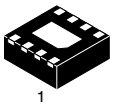


Figure 4. Typical Line Capacitance over Reverse Voltage

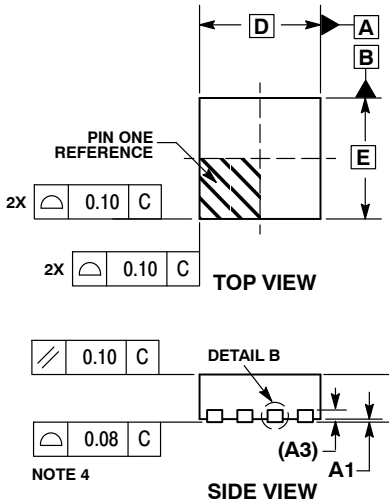
MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

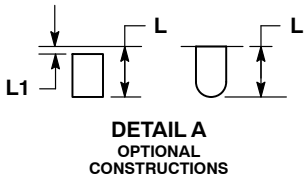


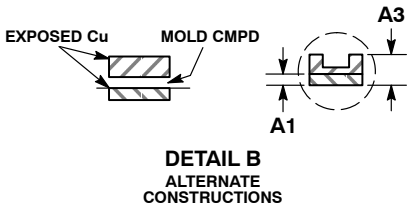
SCALE 4:1

DFN8 2x2, 0.5P
CASE 506AA
ISSUE F

DATE 04 MAY 2016

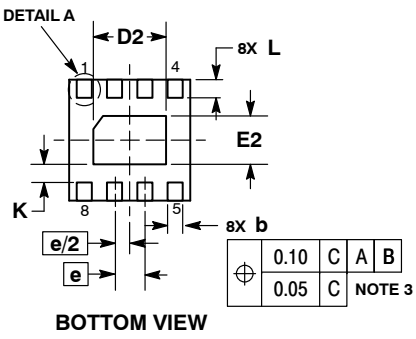




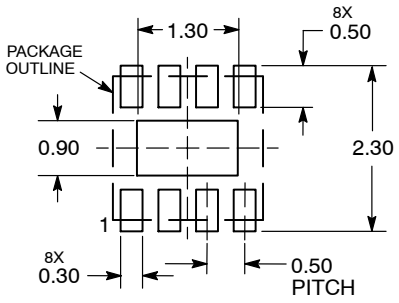


NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994 .
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSION b APPLIES TO PLATED TERMINAL AND IS MEASURED BETWEEN 0.15 AND 0.20 MM FROM TERMINAL TIP.
4. COPLANARITY APPLIES TO THE EXPOSED PAD AS WELL AS THE TERMINALS.

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



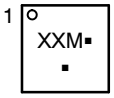
RECOMMENDED SOLDERING FOOTPRINT*



DIMENSIONS: MILLIMETERS

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

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.

DOCUMENT NUMBER:	**98AON18658D**	Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped “CONTROLLED COPY” in red.	
DESCRIPTION:	**DFN8, 2.0X2.0, 0.5MM PITCH**		**PAGE 1 OF 1**

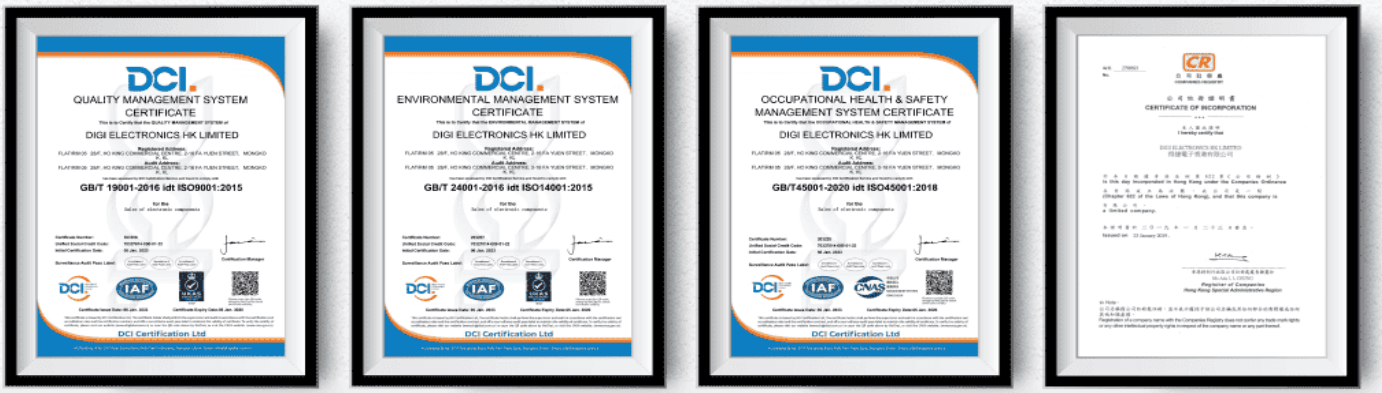
ADDITIONAL INFORMATION

TECHNICAL PUBLICATIONS:
Technical Library: www.onsemi.com/design/resources/technical−documentation
onsemi Website: www.onsemi.com

ONLINE SUPPORT: www.onsemi.com/support
For additional information, please contact your local Sales Representative at www.onsemi.com/support/sales

OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we striciy control the quality of products and services. Welcome your RFQ to Email: Info@DiGi-Electronics.com



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