

NUF2441FC

Advance Information Integrated Passive Filter with ESD Protection

This device is designed for cell phone applications requiring **Headset and Speaker Phone, EMI Filtering and ESD Protection**. This device offers an integrated solution in a small package reducing PCB space and cost.

Features:

- Provides EMI Filtering and ESD Protection
- Single IC Offers Cost Savings by Replacing 2 Inductors, 4 Capacitors, and 4 TVs diodes
- Compliance with IEC61000-4-2, (Level 4)
30 kV (Contact), 30 kV (air)
- Flip-Chip Package
- Moisture Sensitivity Level 1
- ESD Ratings: Machine Model = C
Human Body Model = 3B
- This is a Pb-Free Device

Benefits:

- Flip-Chip Package Minimizes PCB Space
- Integrated Circuit Increases System Reliability versus Discrete Component Implementation
- TVs Devices Provide ESD Protection That is Better than a Discrete Implementation because the Small IC minimizes Parasitic Inductances

Typical Applications:

- Cell Phones
- Communication Circuits

MAXIMUM RATINGS (T_A = 25°C)

Rating	Symbol	Value	Unit
ESD Discharge IEC61000-4-2	V _{pp}		kV
Contact Discharge		30	
Air Discharge		30	
Operating Temperature Range	T _J	-40 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C
Lead Solder Temperature (10 second duration)	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.

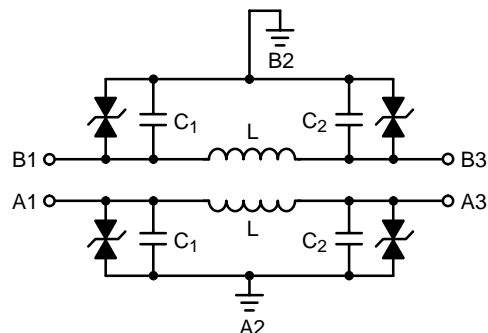
This document contains information on a new product. Specifications and information herein are subject to change without notice.



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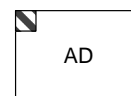
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CIRCUIT DESCRIPTION



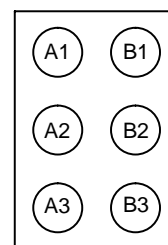
**Flip-Chip
CASE 499J**

MARKING DIAGRAM



A = Device Code
D = Date Code

PIN CONFIGURATION



(Bump View)

ORDERING INFORMATION

Device	Package	Shipping†
NUF2441FCT1G	Flip-Chip (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.

NUF2441FC

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

Device	Device Marking	V _{RWM} (Volts)	V _{BR} @ 1 mA (Volts)		Max I _R @ V _{RWM} = 12 V I/O Pin (μA)	Typical Capacitance C ₁ + C ₂ (pF) (Notes 1, 3)	Typical Pass-Band Inductance L (nH)	Equivalent Series Resistance R _S (Ω) (Note 2)	
			Min	Max				Typ	Max
NUF2441FCT1G	AD	12	14	18	0.1	240	2.9	0.32	0.5

1. Measured at 25°C, V_R = 0, f = 1 MHz, Source A1, GND A2, Open A3.
2. Measured at Room Temp
3. Tolerance = ±20%

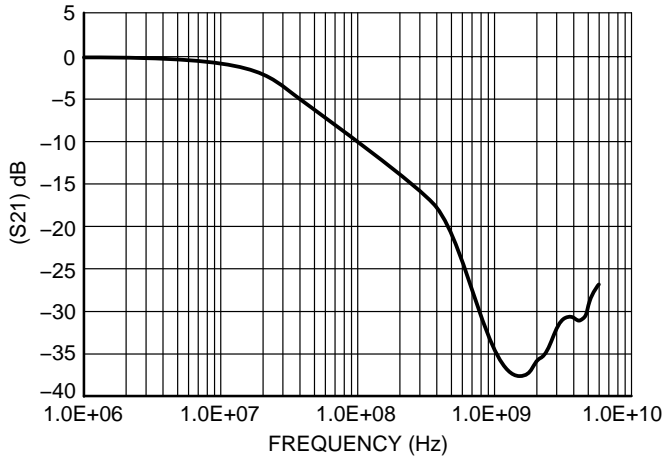


Figure 1. Insertion Loss Characteristic

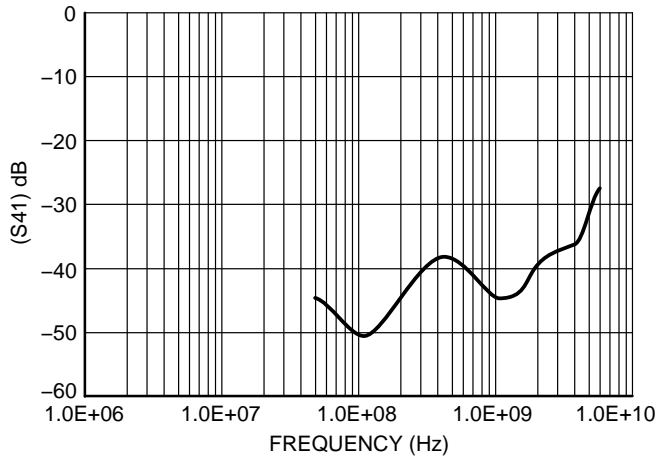


Figure 2. Analog Crosstalk

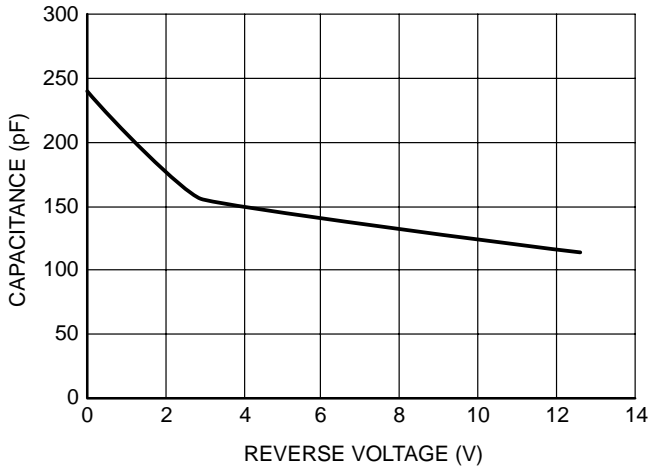


Figure 3. Typical Line Capacitance vs. Reverse Bias Voltage

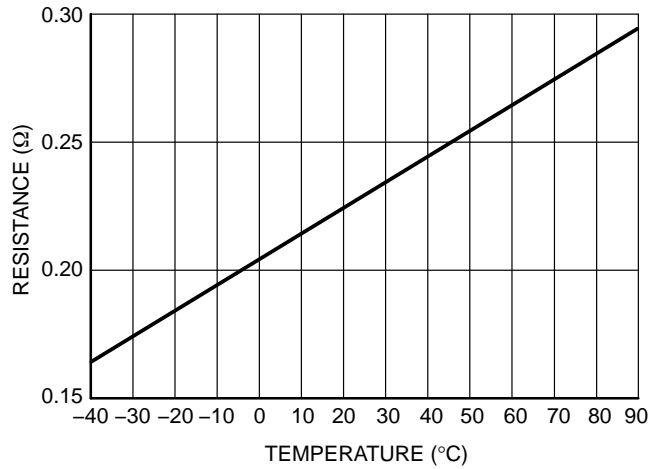


Figure 4. Typical Resistance vs. Temperature

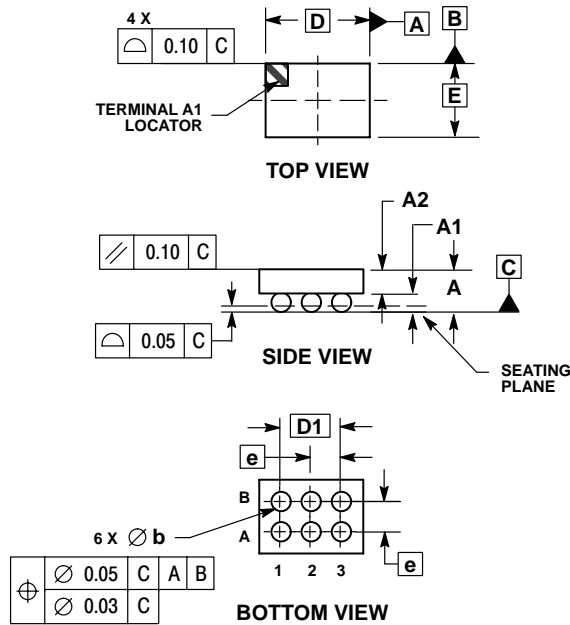
NUF2441FC

PACKAGE DIMENSIONS

6 PIN FLIP-CHIP CSP

CASE 499J-01


ISSUE O



NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. COPLANARITY APPLIES TO SPHERICAL CROWNS OF SOLDER BALLS.

DIM	MILLIMETERS	
	MIN	MAX
A	---	0.700
A1	0.210	0.270
A2	0.380	0.430
D	1.720	BSC
E	1.220	BSC
b	0.290	0.340
e	0.500	BSC
D1	1.000	BSC

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