

- Port impedance: input/output: 50 Ω
- NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q100 Qualified and PPAP Capable
- This is a Pb–Free Device

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Symbol

NSVG3109SG6

				Ratings		
Symbol	Parameter	Conditions	Min	Тур	Max	Unit
I _{CC}	Circuit Current		11.5	16.0	20.5	mA
Gp	Power Gain	f = 1 GHz	21.0	23.0	26.0	dB
		f = 2.2 GHz	22.0	24.0	27.0	
ISL	Isolation	f = 1 GHz	27.0	31.5	-	dB
		f = 2.2 GHz	27.0	31.5	-	
RLin	Input Return Loss	f = 1 GHz	16.0	20.5	-	dB
		f = 2.2 GHz	10.0	15.0	-	
RLout	Output Return Loss	f = 1 GHz	15.0	20.0	-	dB
		f = 2.2 GHz	10.0	14.0	-	
NF	Noise Figure	f = 1 GHz	-	4.3	5.0	dB
		f = 2.2 GHz	-	4.3	5.0	
Po (1dB)	Gain 1dB Compression Output Power	f = 1 GHz	4.0	6.4	-	dBm
		f = 2.2 GHz	2.0	4.2	-	
fu	Upper Limit Operating Frequency	3 dB down below flat gain at f = 1GHz	-	3.6	-	GHz

ELECTRICAL CHARACTERISTICS (Ta = 25°C, V_{CC} = 3 V, Zs = Z_L = 50 Ω)

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions. 1. Pay attention to handling since it is liable to be affected by static electricity due to the high frequency process adopted.

Test Circuit



Figure 1. Test Circuit

Evaluation Board



Symbol	Value		
C1, C2	100 pF		
C3	1000 pF		
L1	100 nH		

Figure 2. Evaluation Board

Characteristics



Output Level, Pout – dBm

NSVG3109SG6

NSVG3109SG6

S Parameter





ORDERING INFORMATION

Device Order Number	Specific Device Marking	Package Type (JEITA, JEDEC)	Package Type	Shipping [†]
NSVG3109SG6T1G	HLF	SC82, SC82A, SC88 (Pb–Free)	MCPH6 (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 Specifications Brochure, BRD8011/D.



SC-88FL / MCPH6 CASE 419AS **ISSUE A**

DATE 28 SEP 2022



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BOTTOM VIEW

NDTES:

- NO INDUSTRY STANDARD APPLIES TO 1. THIS PACKAGE.
- 2. ALL DIMENSIONS ARE IN MILLIMETERS.
- 3. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND THE BAR PROTRUSIONS.

лтм	MILLIMETERS				
MIII	MIN.	NDM.	MAX.		
А	0.80	0.85	0,90		
A1	0.00		0.02		
b	0,25	0.30	0,40		
C	0.12	0.15	0.25		
D	1.94	2.00	2.06		
E	1.54	1.60	1.66		
He	2.05	2.10	2.15		
L	0.19	0.25	0.31		
$\lfloor 1$	0.00	0.07	0,12		

GENERIC **MARKING DIAGRAM***



= Pb-Free Package

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(Note: Microdot may be in either location)

*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.

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