

**XDFNW  
MX SUFFIX  
CASE 717AE**

**6 :CTL15 :IN4 :CTL21 :OUT12 :GND3 :NSG1001MXTAG X2DFNW6 3000 /  
(Pb-Free) Tape & Reel**

XLow Insertion Loss / High Isolation / Middle Power  
 Small and Thin sized Package 1.0 x 1.0 x 0.43 mm  
 Wettable Flank Package for Optimal Automated Optical Inspection (AOI)  
 NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC Q100 Qualified and PPAP Capable  
 These Devices are Pb Free, Halogen Free/BFR Free and are RoHS Compliant

**Typical Applications**

IEEE802.11 a/b/g/n/ac/ax WLAN, Bluetooth Systems  
 LTE & Wireless Communication Applications  
 Automotive V2X and E TOLL Applications

**MAXIMUM RATINGS** (T<sub>A</sub> = 25 C unless otherwise noted)

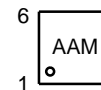
Parameter	Symbol	Value	Unit
Control Voltage	V <sub>CTL</sub>	6	V
Input Power 5 V, CW	P <sub>in</sub>	30	dBm
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	C
Operating Temperature Range	T <sub>opr</sub>	-40 to +125	C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

**TRUTH TABLE**

On Path	V <sub>CTL1</sub>	V <sub>CTL2</sub>
IN – OUT1	Low	High
IN – OUT2	High	Low

**MARKING DIAGRAM**



AA = Specific Device Code  
 M = Date Code

**ORDERING INFORMATION**

Device	Package	Shipping†
NSG1001MXTAG	X2DFNW6 (Pb-Free)	3000 / Tape & Reel

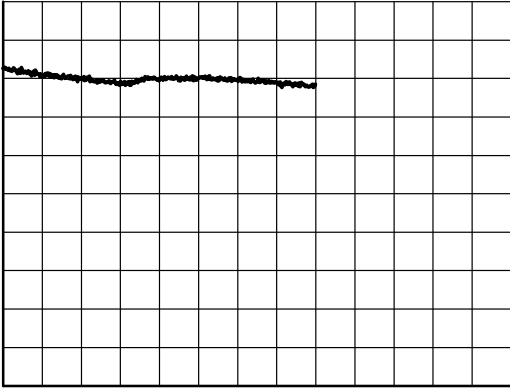
# NSG1001MX, NSVG1001MX

**ELECTRICAL CHARACTERISTICS** at  $T_A = 25$  C Control Voltage: 0/+2.7 V, DC Blocking Capacitor 5.0 pF

Parameter	Symbol	Path	Condition	Value			Unit
				Min	Typ	Max	
Insertion Loss	IL	IN to OUT1, OUT2	f = 2.5 GHz		0.40	0.55	dB
			f = 6.0 GHz		0.50	0.65	
			f = 8.5 GHz		0.65	0.85	
Isolation	ISL	IN to OUT1, OUT2	f = 2.5 GHz	28.0	31.0		dB
			f = 6.0 GHz	26.5	29.5		
			f = 8.5 GHz	17.0	20.0		
Return Loss	RL		f = 2.5 GHz		25.0		dB
			f = 6.0 GHz		20.0		
			f = 8.5 GHz		18.0		
0.1 dB Compression Input Power	Pin 0.1 dB	IN to OUT1, OUT2	f = 2.5 GHz	25.0	27.0		dBm

# NSG1001MX, NSVG1001MX

## ELECTRICAL CHARACTERISTICS



# NSG1001MX, NSVG1001MX

## ELECTRICAL CHARACTERISTICS

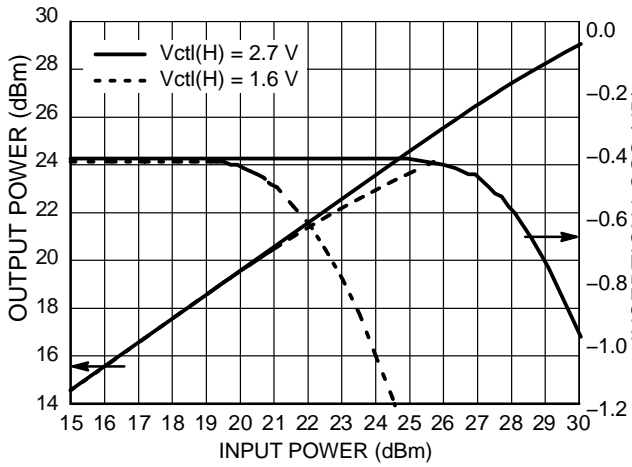


Figure 7. Output power, Insertion Loss vs Input Power  
Freq = 6.0 GHz, IN-OUT1 ON

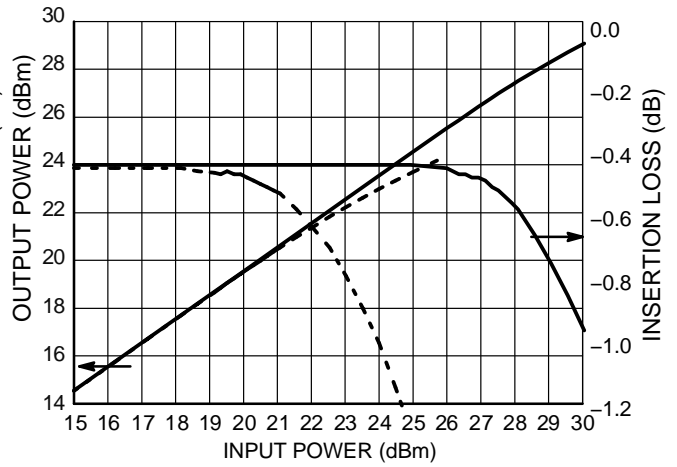
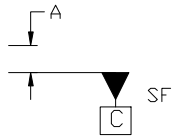
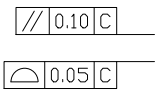
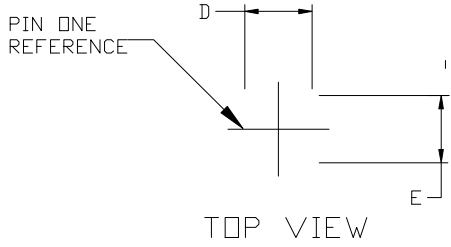


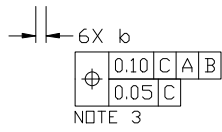
Figure 8. Output power, Insertion Loss vs Input Power  
Freq = 6.0 GHz, IN-OUT2 ON



**XDFNW6 1.0x1.0, 0.35P**



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BOTTOM VIEW

**GENERIC MARKING DIAGRAM\***



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