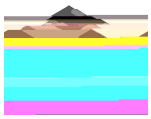


XDFNW
MX SUFFIX
CASE 717AE

6 :CTL15 :IN4 :CTL21 :OUT12 :GND3 :OUT2

NSG1001MXTAG	X2DFNW6 (Pb −Free)	3000 / Tape & Reel

- Low 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_A = 25 C unless otherwise noted)

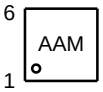
Parameter	Symbol	Value	Unit
Control Voltage	V_{CTL}	6	V
Input Power 5 V, CW	P_{in}	30	dBm
Storage Temperature Range	T_{stg}	−55 to +150	C
Operating Temperature Range	T_{opr}	−40 to +125	C

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_{CTL1}	V_{CTL2}
IN − OUT1	Low	High
IN − OUT2	High	Low

MARKING DIAGRAM



AA = Specific Device Code
M = Date Code

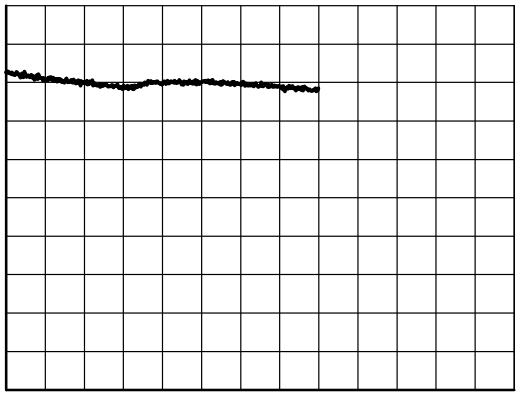
ORDERING INFORMATION

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

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

ELECTRICAL CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

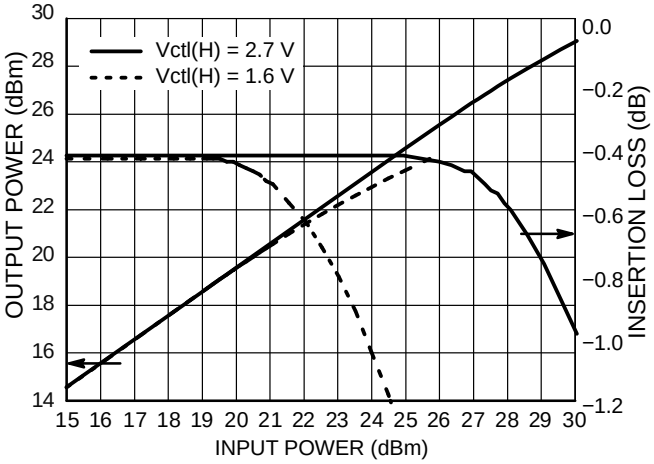


Figure 7. Output power, Insertion Loss vs Input Power Freq = 6.0 GHz, IN−OUT1 ON

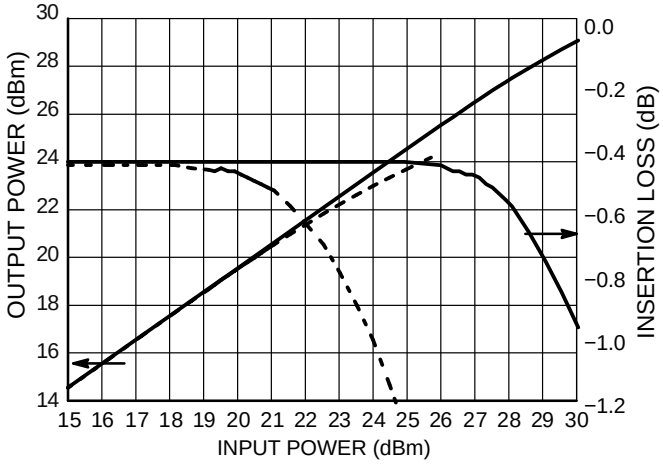
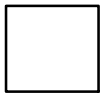


Figure 8. Output power, Insertion Loss vs Input Power Freq = 6.0 GHz, IN−OUT2 ON

XDFNW6 1.0x1.0, 0.35P
CASE 717AE
ISSUE B

DATE 06 MAY 2022



XX = Specific Device Code
M = Date Code

*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.