

# Frequency Doubler

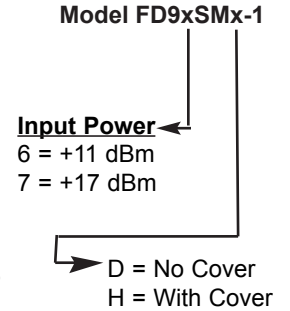
## High Isolation, In-line Output

# Model FD9xSMx-1

Input 2.0 to 10.0 GHz  
Output 4.0 to 20.0 GHz

### Electrical Specifications<sup>(1)</sup>:

Parameter	Conditions		Specifications		
	Input (GHz)	Output (GHz)	Min	Typical	Max
Insertion Loss: <sup>(2)</sup>	2.0-9.0	4.0-18.0		11.0 dB	13.0 dB
	2.0-10.0	4.0-20.0		11.5 dB	15.0 dB
Fundamental Isolation: <sup>(3)</sup>	2.0-10.0	4.0-10.0	25 dB	32 dB	
Third Harmonic Suppression: <sup>(4)</sup>	2.0-10.0	4.0-20.0	20 dBc	26 dBc	
Input VSWR:	2.0-5.0	4.0-10.0		2.5:1	
	5.0-10.0	10.0-20.0		1.8:1	
Input Power:	2.0-10.0	4.0-20.0		+11 dBm +17 dBm	FD96 FD97



### Notes:

- Specifications are guaranteed when tested as a doubler in a 50 Ohm system at +25°C with nominal input power. Specifications indicated as typical are not guaranteed.
- Insertion loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
- Fundamental isolation is referenced to the fundamental input.
- Third Harmonic Suppression is referenced to the second harmonic output.

## FD9xSMD-1

Outline: SMD3

TOLERANCE:  
INCHES .XX±.02  
.XXX±.010  
mm .XX±.25

## FD9xSMH-1

Outline: SMDH3

TOLERANCE:  
INCHES .XX±.02  
.XXX±.010  
mm .XX±.25

All dimensions are in inches and [mm].

## Typical Performance at 25°C

