

AUTOPOL-40-4T-M

40 GHz SP4T 4-Port Programmable Switch



Introduction

The AUTOPOL-40-4T-M is a programmable SP4T mechanical switch operating from DC - 40 GHz and featuring 2.92 mm K-connectors. The unit features both front panel and remote control options. The unit can be remotely controlled via Serial, 5V TTL, or from control pendant with position indicator. A proprietary mechanical design cleans the contacts after each switch, which provides up to 5-million cycles at .01dB repeatability with an overall 10-million cycle-rated lifespan.

Operating Specifications

Frequency range	DC to 40 GHz
Insertion loss	0.3 dB + 0.015 x freq. (GHz), DC to 26.5 GHz 0.030 x freq. (GHz) - 0.1 dB, 26.5 to 40 GHz
Isolation	100 dB minimum, DC to 12 GHz 80 dB minimum, 12 to 15 GHz 70 dB minimum, 15 to 20 GHz 65 dB minimum, 20 to 40 GHz
SWR	1.3 maximum, DC to 4 GHz 1.35 maximum, 4 to 12.4 GHz 1.5 maximum, 12.4 to 18 GHz 1.7 maximum, 18 to 26.5 GHz 1.95 maximum, 26.5 to 40 GHz
Repeatability	0.03 dB maximum (Up to 5 million cycles measured at 25 °C)
Connectors	2.92 (F)

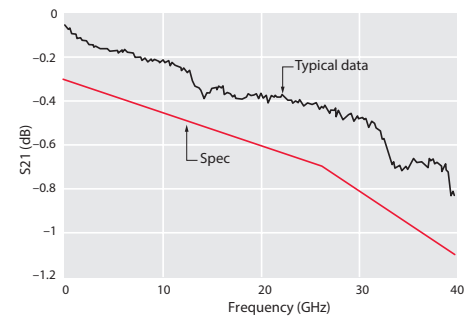


Figure 11. 87104/6D insertion loss versus frequency

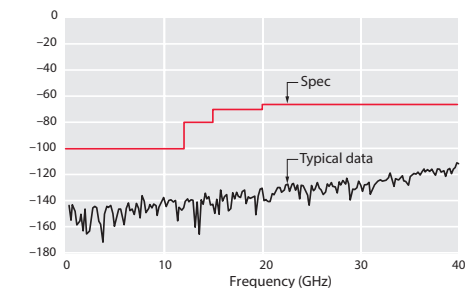


Figure 12. 87104/6D isolation loss versus frequency

Switch Specifications

Parameter test (units)	Conditions	Min	Nom	Max
Supply voltage, V_{cc}				
Option 024 and T24 (V)		20	24	32
Supply current, I_{cc}	Switching pulse width \geq 15 ms; $V_{cc} = 24$ VDC			
Option 024 and T24			200	
Supply current (quiescent)				
Option 024 and T24 (mA)		25		50
Option T24				
High level input (V)		3		7
Low level input (V)			0.8	
Max high input current (mA)	$V_{cc} = \text{Max}$ $V_{input} = 3.85$ VDC		1	1.4