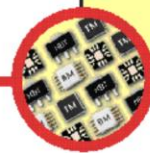




Gallium Nitride DC – 4.0GHz 80W (Pulsed), 40W (CW) SPDT T/R Switch

AM004049S2-0H
September 2025
Preliminary



DESCRIPTION

AMCOM's AM004049S2-0H is a symmetric reflective broadband SPDT power switch. It has less than 1.5dB insertion loss, greater than 25dB isolation between the ON port and OFF port, and better than 2:1 VSWR from DC to 4.0GHz band. It operates at frequencies from 250 MHz to 4 GHz with up to 80W pulsed and 40W CW input power handling. Switching time is less than 250 nanoseconds.



FEATURES

- Broadband from DC to 4.0GHz
- Power handling is 40W CW, 80W pulsed
- Typical 1.5 dB Insertion Loss at 1.5GHz
- Input & output matched to 50 Ohms

APPLICATIONS

- T/R modules
- Instrumentation
- Lab Measurements
- Modulators

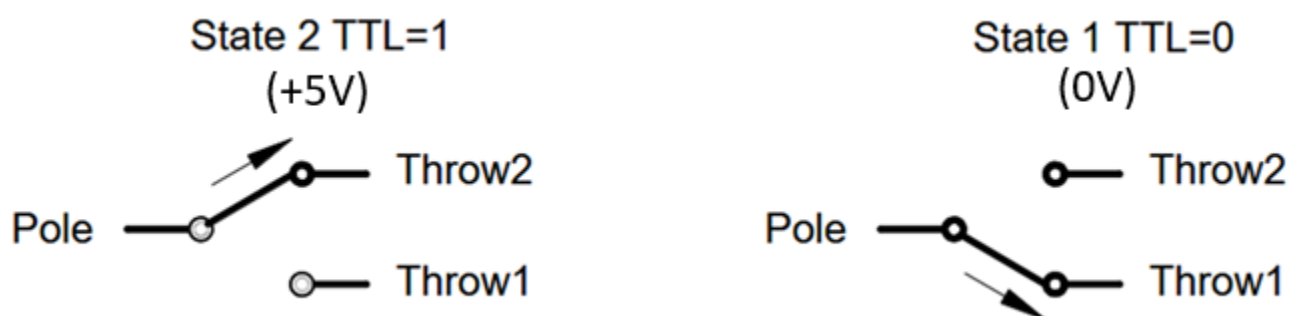
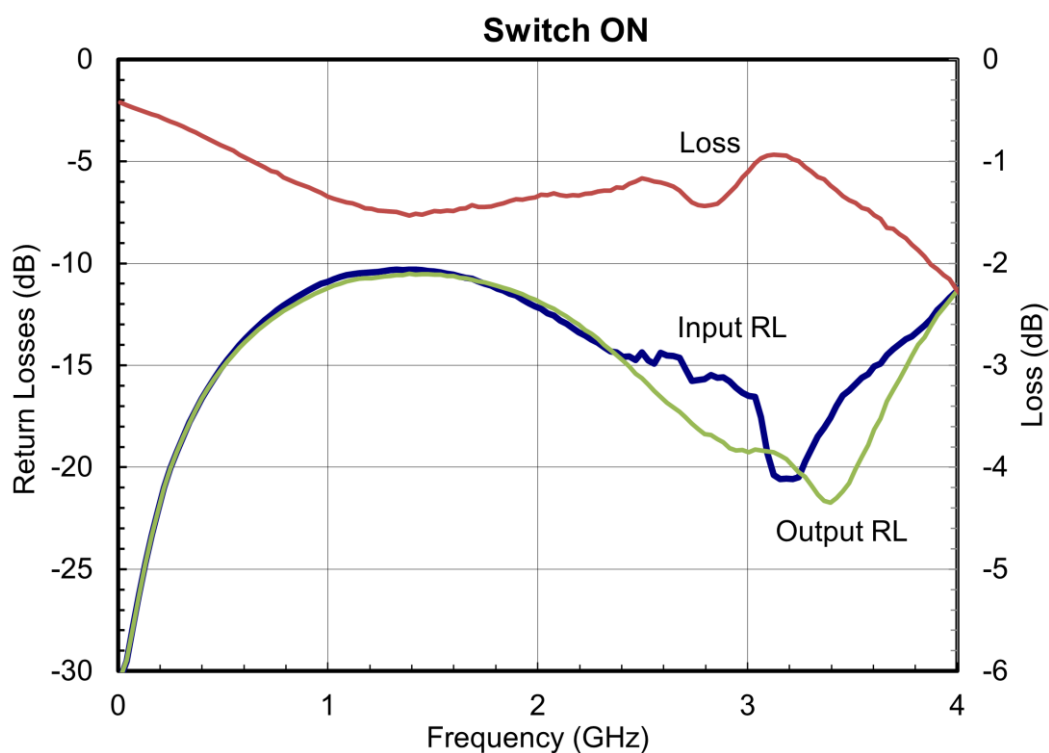
TYPICAL PERFORMANCE *

Parameters	Minimum	Typical	Maximum
TTL Voltage Control(TTL=1 THROW2 ON)		5V	
TTL Voltage Control(TTL=0 THROW1 ON)		0V	
Frequency		DC – 4.0GHz	
ON Insertion Loss at 4GHz**	-	1.5dB	2.2dB
Input /Output Return Loss	10dB	12dB	
Isolation at 1GHz		40dB	
Isolation at 2GHz		32dB	-
Isolation at 4GHz		25dB	
Input power at 0.5dB comp. (CW)		46dBm	-
Input power at 0.5dB comp. (Pulse)		49dBm	-
Switching Speed		<250ns	

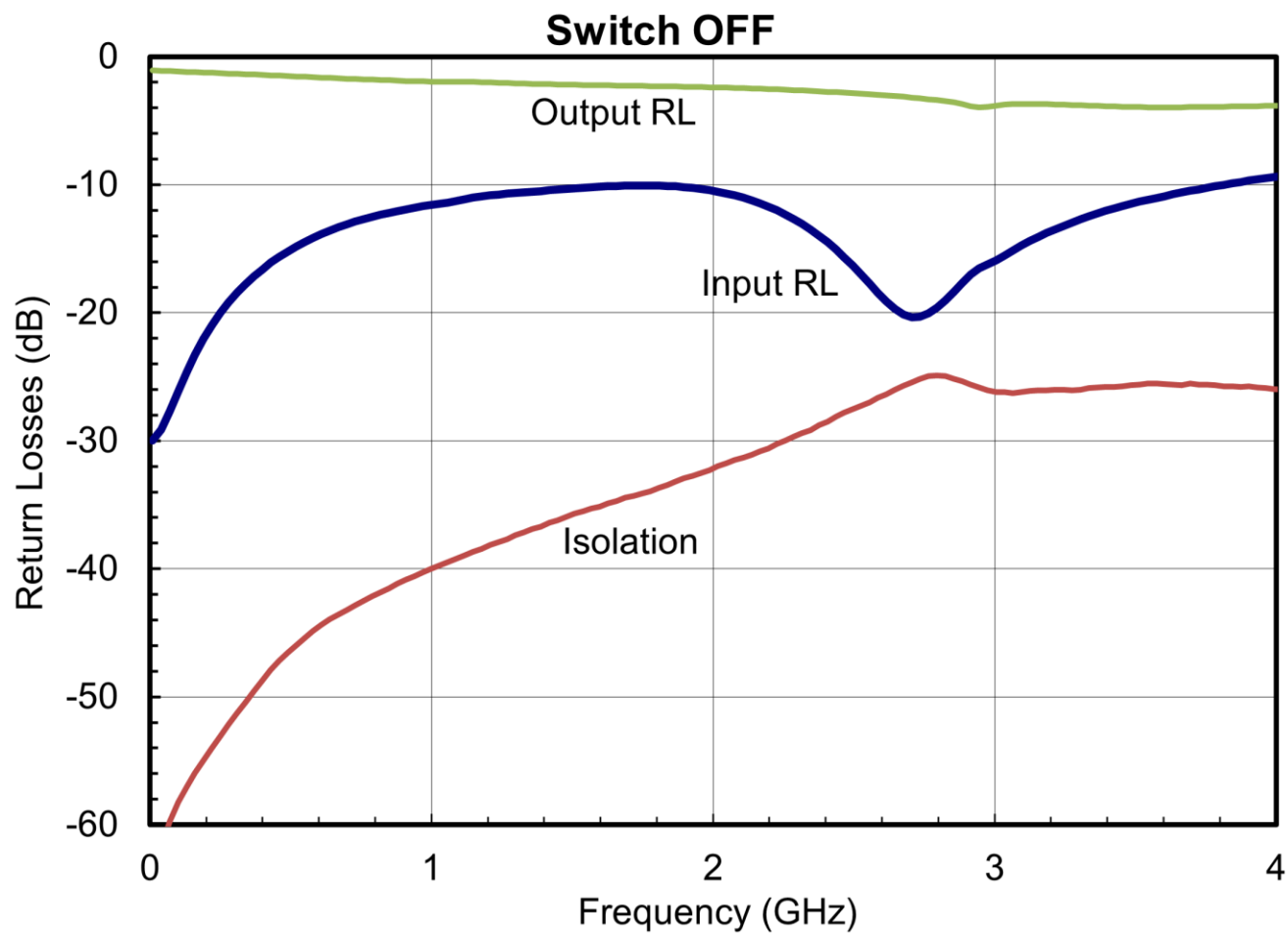
*Specifications subject to change without notice

ABSOLUTE MAXIMUM RATING

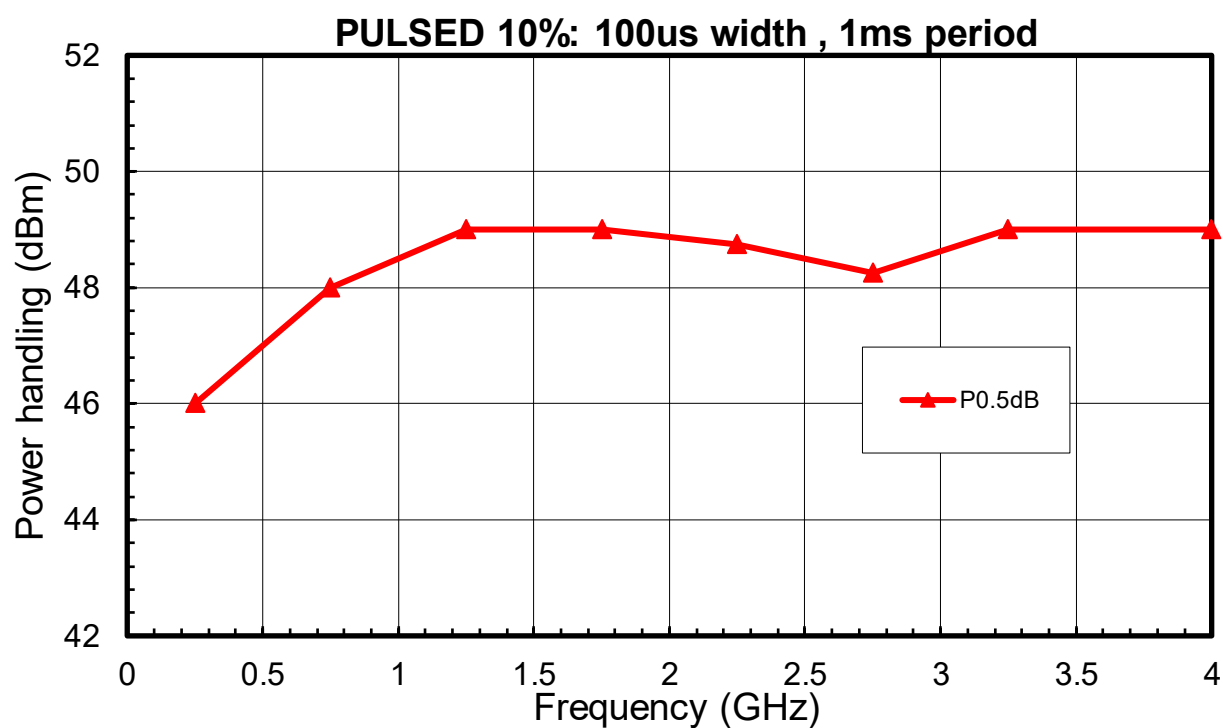
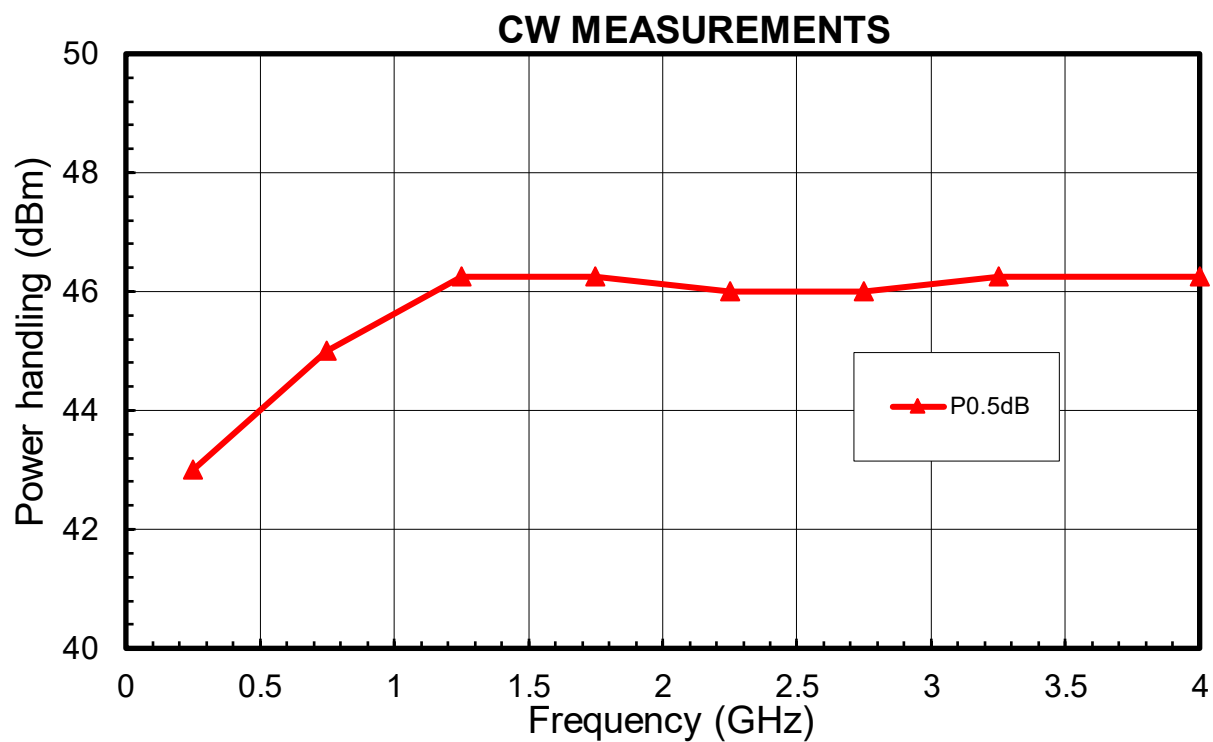
Parameters	Symbol	Rating
Supply Voltage (+5V)	+5V	+6V
RF Power (CW)	Pin	46.5dBm
Ambient Temperature		60°C
Storage Temperature		-40°C to 125°C

SMALL SIGNAL DATA**A) ON State**

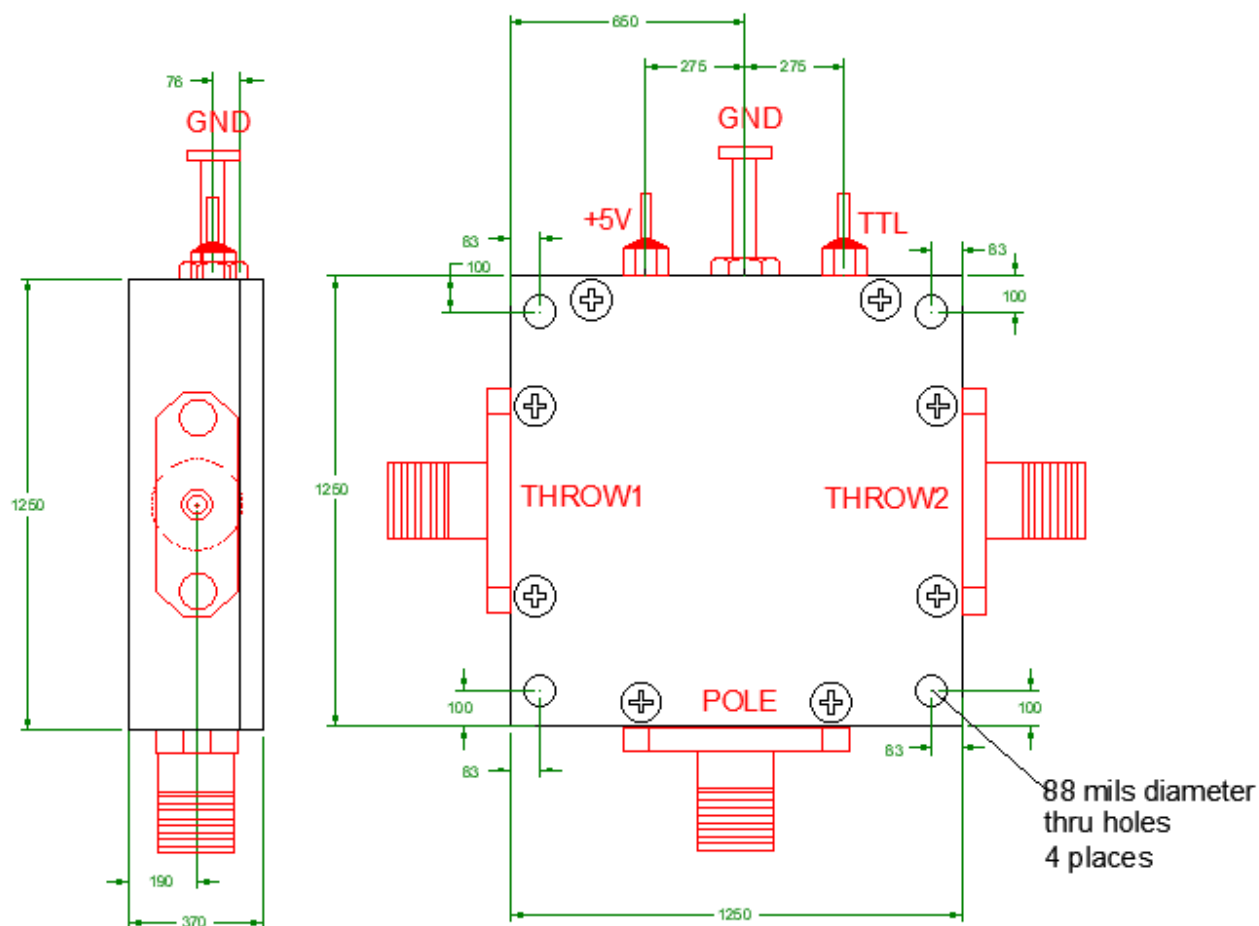
B) OFF State



POWER



PACKAGE OUTLINE



DIMENSIONS in mils

Notes:

- 1- TTL=0 for POLE to THROW1, TTL=1 for POLE to THROW2
- 2- Switch is symmetric
- 3- All ports have female SMA-type connectors