

Fast SPST switches up to 150 GHz

Features

- Low insertion losses
- High isolation
- Low cost
- Fast switching time
- More than 10% operation bandwidth
- Easy to use

Applications

- Radars
- Fast protection system
- AM of microwave signals
- Lock-in detection systems



Single Stage Switch

Double Stage Switch

Description

ELVA-1 series fast SPST switches is built on thin film PIN diodes. A built-in driver provides switching time of 4-6 ns. Standard models have an operating bandwidth of a few GHz, with low insertion losses, and more than 30 dB isolation. Operating bandwidth can be extended to more than 10% upon special request.

Specifications

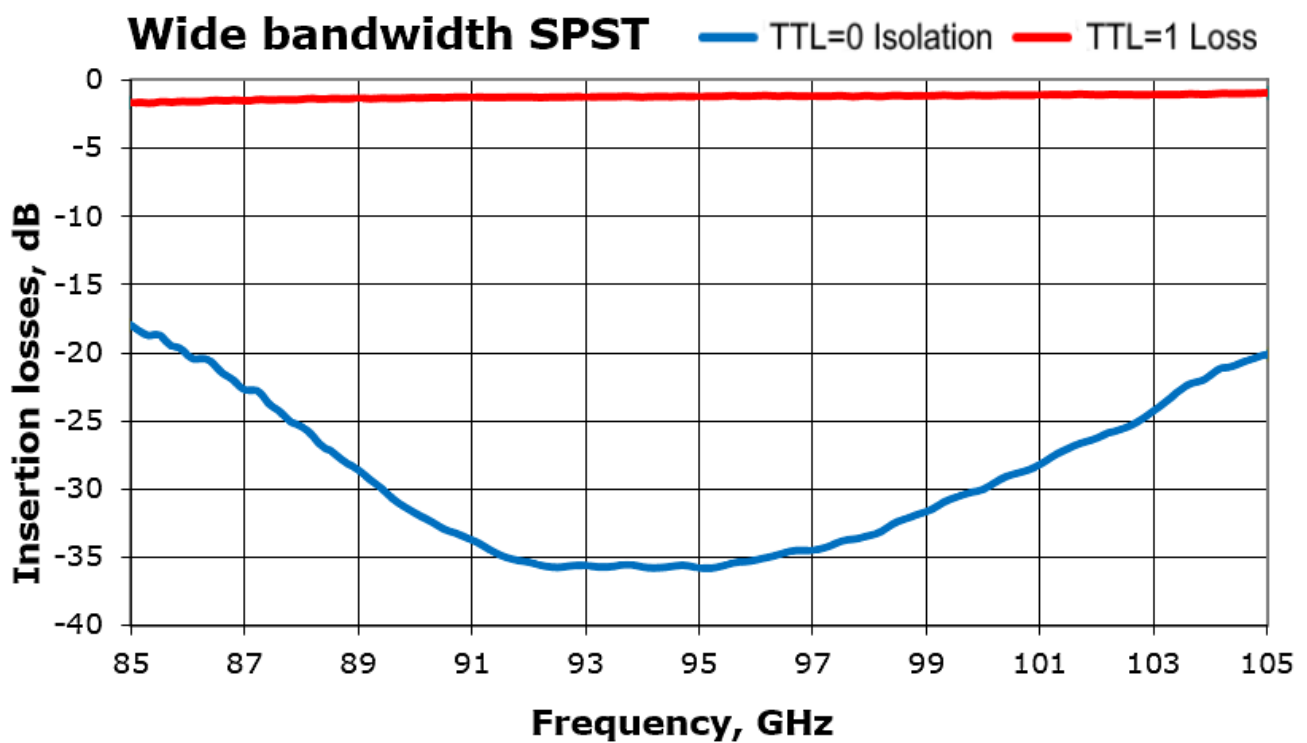
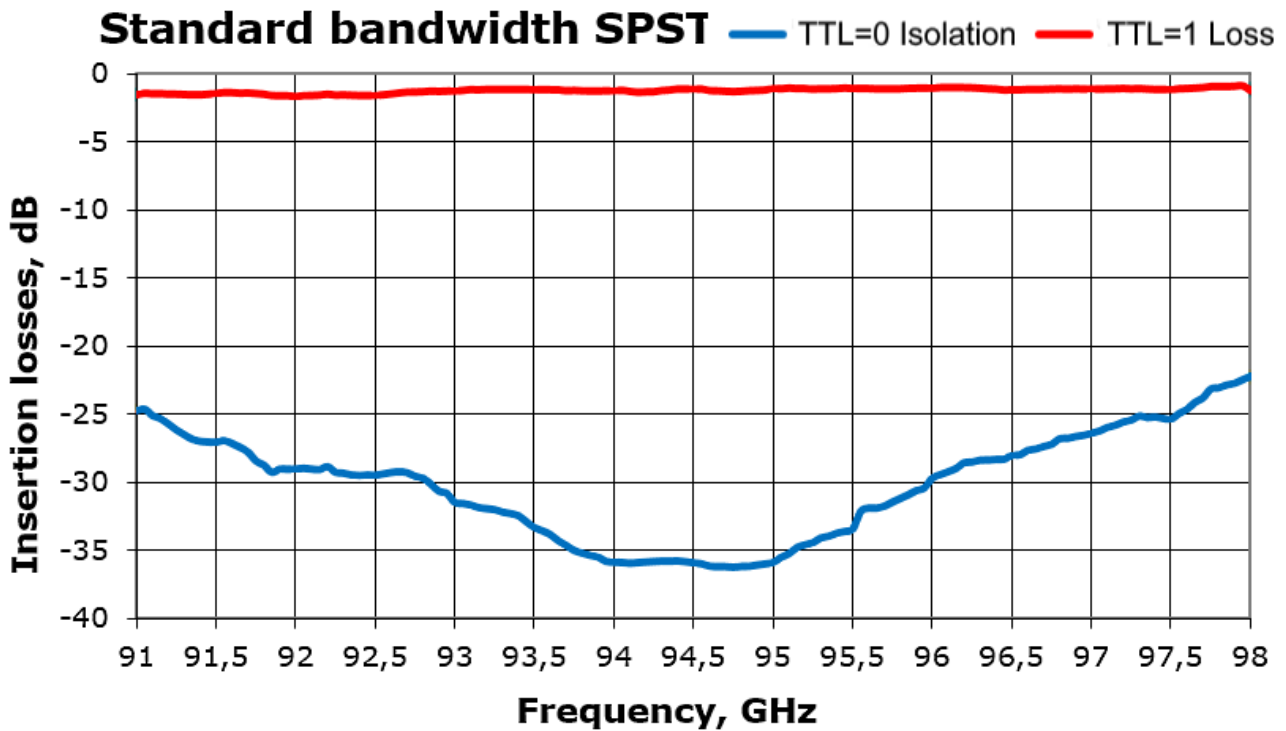
Model	SPST-42	SPST-28	SPST-22	SPST-19	SPST-15	SPST-12	SPST-10	SPST-08	SPST-06
Frequency Band	K	Ka	Q	U	V	E	W	F	D
Central frequency within a range, GHz	18-26.5	26-40	33-50	40-60	50-75	60-90	75-110	90-140	110-150
Operating bandwidth*, GHz	2	2	2	2	3	3	3	4	4
Insertion Loss, dB (typ)	0,7	0,7	0,8	0,8	0,8	1,0	1,0	1,5	1,5
Isolation**, dB (min)	30								
Peak Power, W(max)	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,8
Switching Time***, ns	4-6								
Power supply	+5 V DC, -9 VDC								
Control signal	TTL								
Control Input impedance	50 Ohm								

* Models with operating bandwidth > 10% of central frequency are available upon request

** A double stage switch can be produced upon request. This configuration provides >50 dB isolation.

*** Guaranteed Rise Time 0 to 90% RF, and Fall Time 100% to 10% RF.

Typical data for different models are presented below:



How to order

Specify Model Number SPST-XX/AA/BB

- **XX** - Waveguide band (WR-Number)
- **AA** - Central operating frequency (Fc), GHz
- **BB** - Operation bandwidth ($F_c \pm BB/2$), GHz

Example: SPST-10/94/04

indicates WR-10 band, $F_c = 94$ GHz,
Operation bandwidth 4 GHz ($94 \text{ GHz} \pm 2 \text{ GHz}$)