

## FFS-50-22600-MS

0.05~22.6GHz

### Features:

- \* High Frequency Stability
- \* Ultra Low Phase Noise

### Applications:

- \* Wireless
- \* Transceiver
- \* Laboratory Test
- \* Radar

### Electrical

Output Frequency:	0.05~22.6GHz
Step:	0.1Hz
	0.1mHz @25μS
Switching Speed*1:	25, 200, 400μS max.
Output Power:	4±5dBm
Frequency Stability:	same as reference
Frequency Accuracy:	same as reference
Output Spurious:	-65dBc max.
	-20dBc max. @11.3G~22.6GHz
	1/2&3/2 <sup>th</sup> Harmonic
Output Harmonic:	-5dBc max.
External Reference:	100MHz
Reference Power:	7±3dBm
Reference Phase Noise:	-155dBc/Hz max. @1kHz
Voltage:	+12±0.5V DC
	+15V DC max.
Current:	0.65A max.
	0.7A max. @25μS
Control Type:	SPI
Impedance:	50Ω

[1] 200us hopping time, 30 seconds startup time per power up;  
25us hopping time, 5 seconds startup time per power-up.

		Output Phase Noise(dBc/Hz)							
		1GHz		5GHz		10GHz		22.6GHz	
Offset	Freq.	other	25μS	other	25μS	other	25μS	other	25μS
	100Hz	-105	-110	-91	-98	-85	-92	-79	-85
	1KHz	-127	-130	-113	-117	-107	-110	-101	-104
	10KHz	-135	-136	-122	-125	-116	-119	-110	-112
	100KHz	-135	-136	-122	-125	-116	-119	-110	-112
	1MHz	-135	-136	-122	-125	-116	-119	-110	-112

### Mechanical

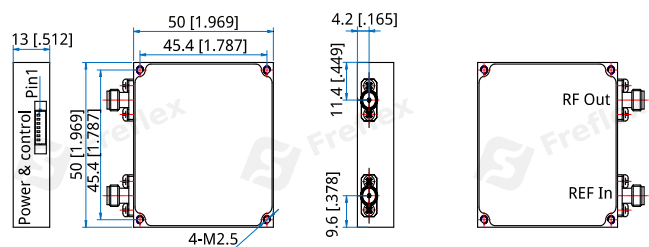
Size*2:	50*50*13mm
	1.969*1.969*0.512in
REF In Connectors:	SMA Female (Removable)
RF Out Connectors:	2.92 Female (Removable)
Power & Control Interface:	53261-0671-7P
Mounting:	4-M2.5 Through hole

[2] Exclude connectors.

### Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

### Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

### Pin Numbering

Pin	Function
1	+12V
2	GND
3	MOSI (SPI communication interface)
4	LE (SPI communication interface)
5	MISO (SPI communication interface)
6	SCK (SPI communication interface)
7	LD (Locked: high voltage)

### How To Order

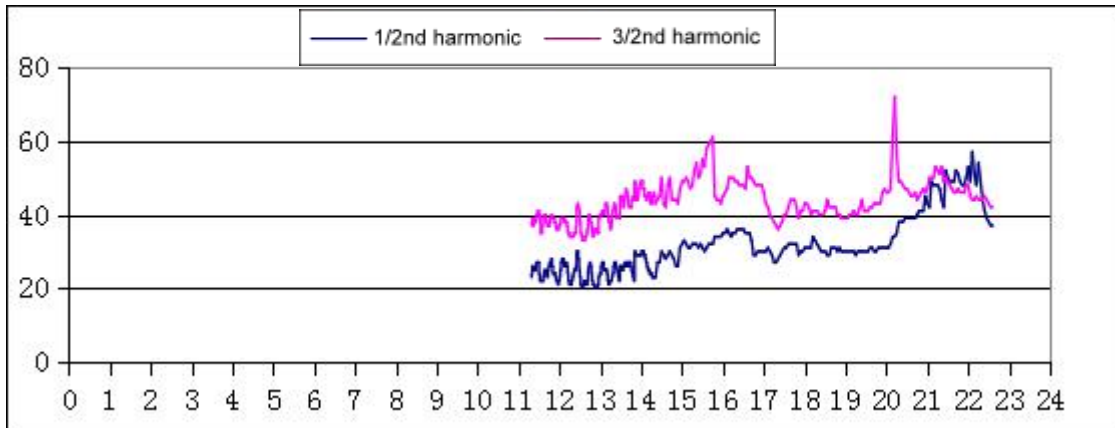
**FFS-50-22600-MS-1** - Switching Speed: 200μS max.

**FFS-50-22600-MS-3** - Switching Speed: 400μS max.

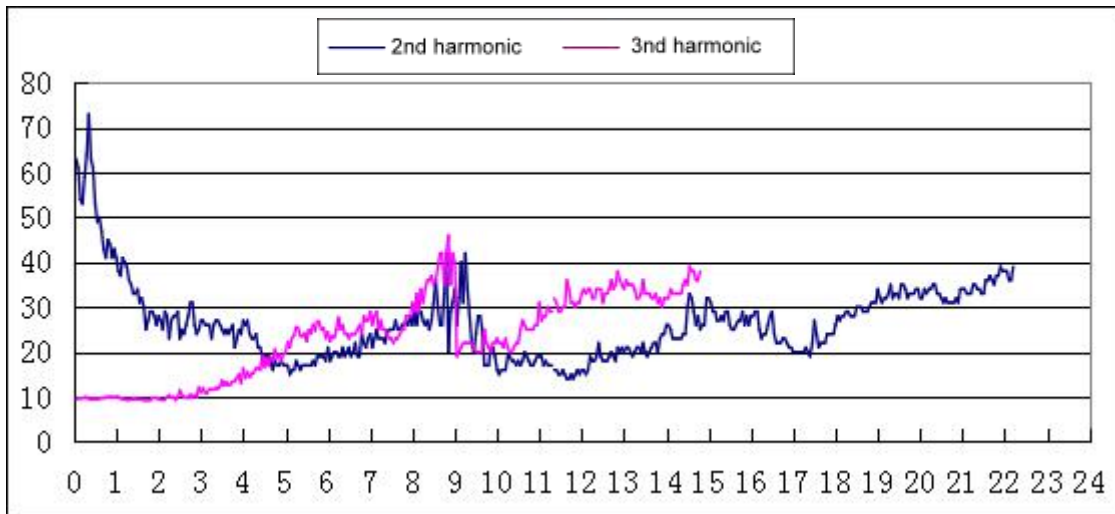
**FFS-50-22600-MS-4** - Switching Speed: 25μS max.

Customization is available upon request.

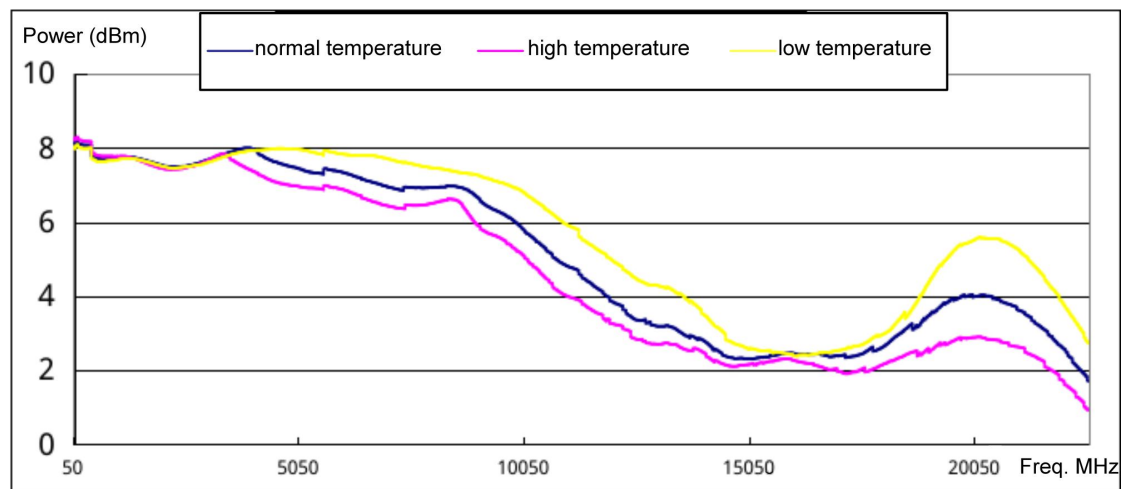
Typical Performance Curves:  
1/2&3/2nd Harmonic (dBc)



2&3rd Harmonic (dBc)



Output Power (dBm)



## 10GHz Phase Noise (dBc)

