



# CFPS-59

ISSUE 2; 6 AUG 2008



### Delivery Options

- Please contact our sales office for current leadtimes

### Description

- The CFPS-59 is a high frequency, surface mount oscillator with complementary LVPECL outputs

### Output Compatibility

- 2.5V LVPECL
- Output Load 50Ω terminated to Vs-2.0V

### Output Voltage

- "0" Level ( VoL ), +1.195V max
- "1" Level ( VoH ), +1.415V min

### Package Outline

- 7.5 x 5.0mm SMD

### Frequency Range

- 75.0 to 170.0MHz

### Frequency Stabilities

- ±25ppm, ±50ppm, ±100ppm (inclusive of supply voltage & output load variations over the operating temperature range)

### Operating Temperature Ranges

- -10 to 70°C ( CFPS-59 )
- -40 to 85°C ( CFPS-59I )

### Storage Temperature Range

- -55 to 125°C

### Tri-state Operation

- Logic '1' (≥70% Vs) to pad 1 enables oscillator output
- Logic '0' (≤30% Vs) to pad 1 disables oscillator output; the oscillator output goes to the high impedance state
- No connection to pad 1 enables oscillator output
- Stand-by current 30μA max

### Phase Jitter ( 12kHz to 20MHz )

- 1ps RMS max

### Environmental

- Drop: natural drop, 3 times, from 75cm onto a hard wooden plate (30mm thick)
- Vibration: MIL-STD-202F, Method 204D, Test Condition D 20G, freq range 10-2000Hz, 4 hrs in X, Y & Z axes ( total 12 hrs )

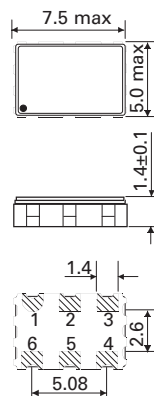
### Marking

- Model Number
- Frequency

### Minimum Order Information Required

- Frequency + Model Number + Operating Temperature Code (if applicable) + Frequency Stability

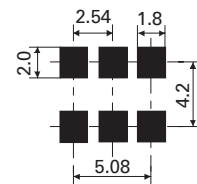
### Outline in mm



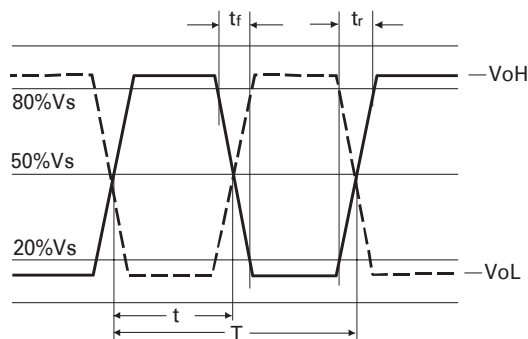
### Pad Connections

1. Enable/Disable
2. N/C
3. GND
4. Output 1
5. Output 2
6. +Vs

### Solder pad layout



### Output Waveform



$$\text{Duty cycle} = \frac{t}{T} \times 100(\%)$$

SURFACE MOUNT  
SPX08

Tel: +44 (0)1460 270200

Fax: +44 (0)1460 72578

Website: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

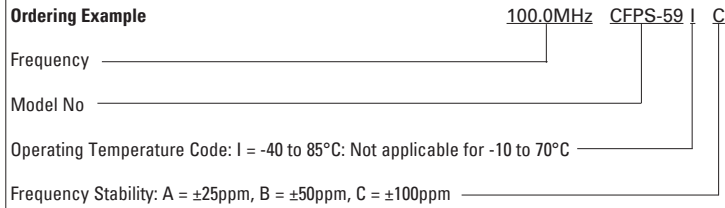
e-mail: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)



**Electrical Specification - maximum limiting values when measured in LVPECL test circuit**

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time (tr) (20% to 80%)	Fall Time (tf) (80% to 20%)	Duty Cycle	Model Number
75.0 to 170.0MHz	$\pm 25\text{ppm}^*$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	2.5V $\pm 5\%$	50mA	0.7ns	0.7ns	45/55%	CFPS-59 CFPS-59I

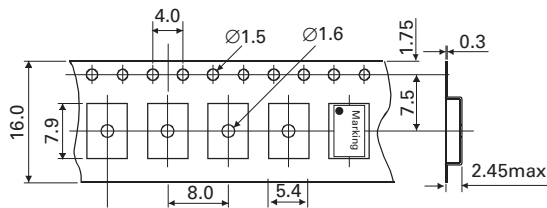
**Ordering Example**



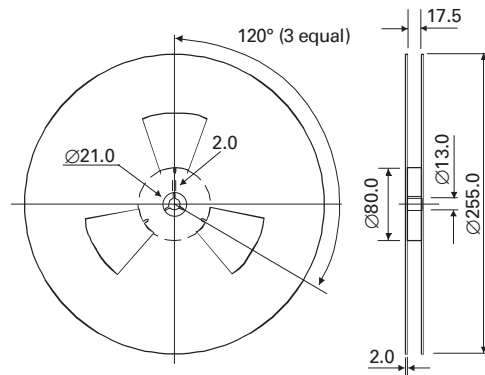
\*Note - Code IA,  $\pm 25\text{ppm}$  over -40 to 85°C is not available

SURFACE MOUNT  
SPXOs

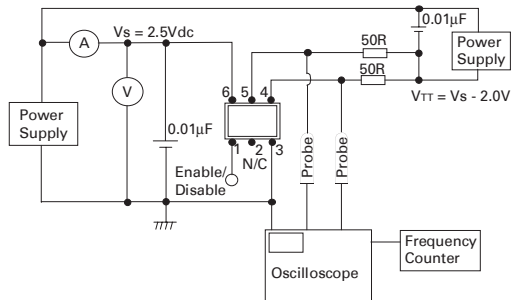
**Outline in mm - Tape**



**Outline in mm - Reel**



**Test Circuit - LVPECL**



Tel: +44 (0)1460 270200

Fax: +44 (0)1460 72578

Website: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

e-mail: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)