

# Thin-Film Low Pass Filter



## LP0805 Type Harmonic

### GENERAL DESCRIPTION

The ITF (Integrated Thin-Film) SMD Filter is based on thin-film multilayer technology. The technology provides a miniature part with excellent high frequency performance and rugged construction for reliable automatic assembly.

The ITF Filter is offered in a variety of frequency bands compatible with various types of high frequency wireless systems.

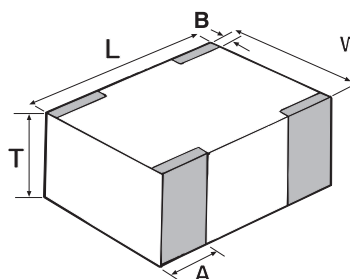
### FEATURES

- Small Size: 0805
- Frequency Range: 800MHz - 3.5GHz
- Characteristic Impedance: 50Ω
- Operating / Storage Temp.: -40°C to +85°C
- Power Rating: 3W Continuous
- Low Profile
- Rugged Construction
- Taped and Reeled

### APPLICATIONS

- Mobile Communications
- Satellite TV Receivers
- GPS
- Vehicle Location Systems
- Wireless LAN's

### DIMENSIONS: millimeters (inches)



|   |                            |
|---|----------------------------|
| L | 2.03±0.1<br>(0.080±0.004)  |
| W | 1.55±0.1<br>(0.061±0.004)  |
| T | 1.02±0.1<br>(0.040±0.004)  |
| A | 0.56±0.25<br>(0.022±0.010) |
| B | 0.35±0.15<br>(0.014±0.006) |

### FINAL QUALITY INSPECTION

Finished parts are 100% tested for electrical parameters and visual/mechanical characteristics. Each production lot is evaluated on a sample basis for:

- Static Humidity: 85°C, 85% RH, 160 hours
- Endurance: 125°C,  $I_R$  4 hours

### TERMINATION

Nickel/Solder coating (Sn, Pb) compatible with automatic soldering technologies: reflow, wave soldering, vapor phase and manual.

### HOW TO ORDER

**LP**  
T  
**Style**  
Low Pass

**0805A**  
T  
**Size**  
0805

**0902**  
T  
**Frequency**  
MHz

**AW**  
T  
**Termination**  
AW= Nickel/Solder (SnPb)  
\*\*AS = Nickel/ Lead Free  
Solder (Sn100)

**TR**  
T  
**Packaging Code**  
TR = Tape and Reel

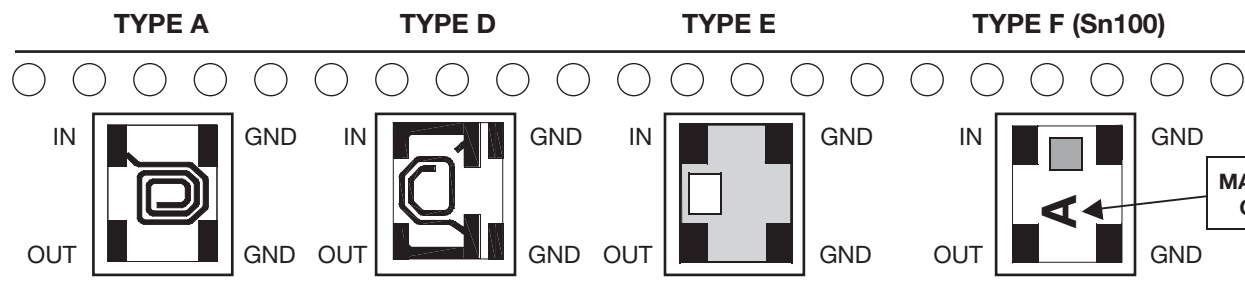
\*\*RoHS compliant

Not RoHS Compliant



### TERMINALS AND LAYOUT (Top View)

#### Orientation in Tape



**MARKING CODE**

For RoHS compliant products,  
please select correct termination style.

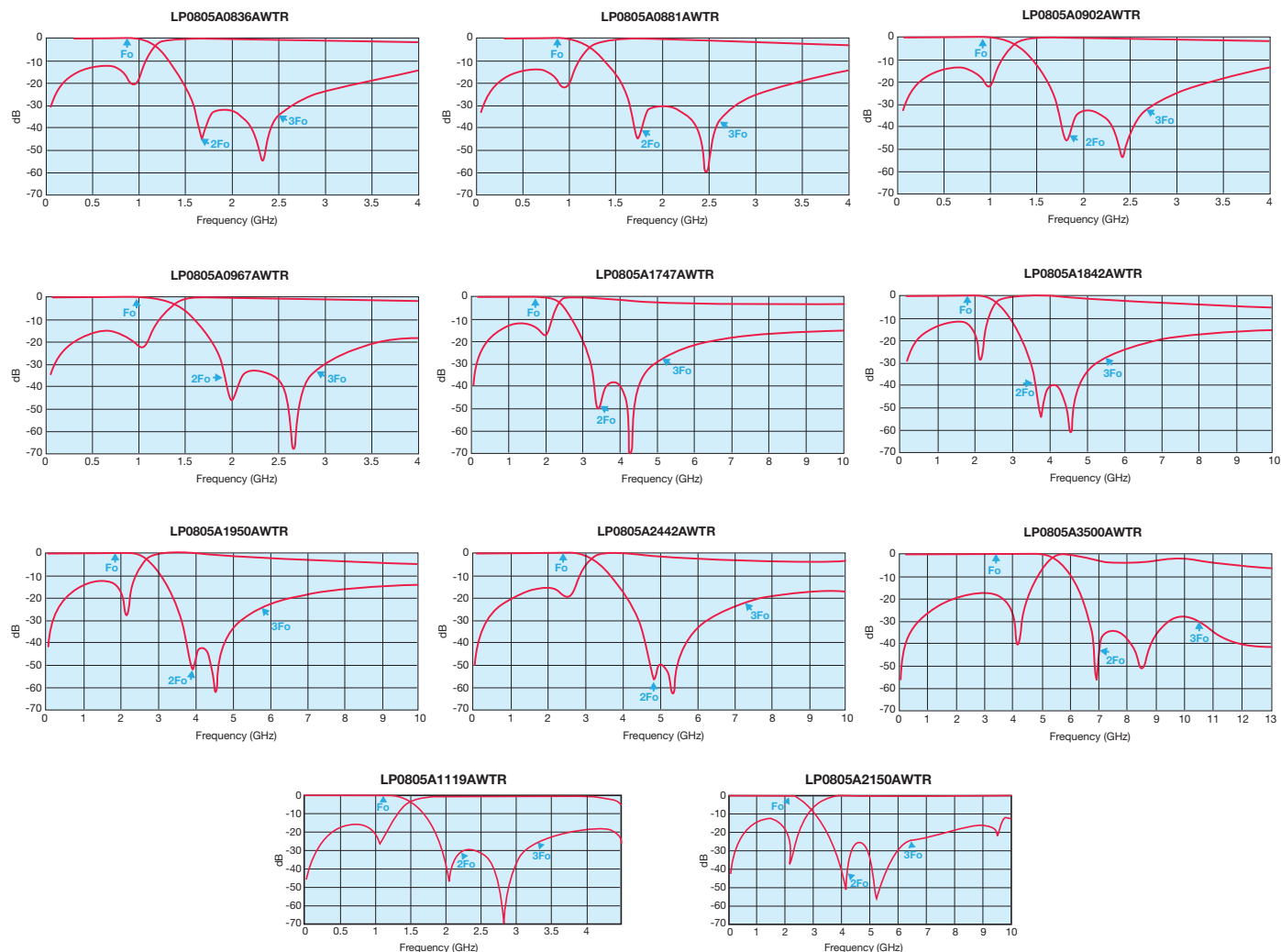
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### ELECTRICAL CHARACTERISTICS

| Application  | Part Number   | Frequency Band (MHz) | I. Loss max          | VSWR max | Attenuation (dB) Typical                       | Layout Type (SnPb) | Layout Type F Marking Code |
|--------------|---------------|----------------------|----------------------|----------|------------------------------------------------|--------------------|----------------------------|
| E-GSM        | LP0805A0897AW | 880 - 915            | 0.4dB<br>(0.3dB typ) | 1.7      | 30 @ 2X <sub>Fo</sub><br>20 @ 3X <sub>Fo</sub> | A                  | E                          |
|              | LP0805A0942AW | 925 - 960            |                      |          |                                                | A                  | F                          |
| GSM          | LP0805A0902AW | 890 - 915            |                      |          |                                                | A                  | E                          |
|              | LP0805A0947AW | 935 - 960            |                      |          |                                                | A                  | F                          |
|              | LP0805A1119AW | 1101 - 1137          |                      |          |                                                | A                  | H                          |
| AMPS         | LP0805A0836AW | 824 - 849            |                      |          |                                                | A                  | A                          |
|              | LP0805A0881AW | 869 - 894            |                      |          |                                                | A                  | C                          |
| PCN          | LP0805A1747AW | 1710 - 1785          |                      |          |                                                | D                  | I                          |
|              | LP0805A1842AW | 1805 - 1880          |                      |          |                                                | D                  | J                          |
| PCS          | LP0805A1880AW | 1850 - 1910          |                      |          |                                                | D                  | K                          |
|              | LP0805A1960AW | 1930 - 1990          |                      |          |                                                | D                  | M                          |
| PHP          | LP0805A1907AW | 1895 - 1920          |                      |          |                                                | D                  | L                          |
| DECT         | LP0805A1890AW | 1880 - 1900          |                      |          |                                                | D                  | K                          |
| 3G           | LP0805A2150AW | 1905 - 2180          |                      |          |                                                | D                  | N                          |
| Wireless LAN | LP0805A2442AW | 2400 - 2484          |                      |          |                                                | D                  | S                          |
| WLL          | LP0805A3500AW | 3400 ~ 3600          |                      |          |                                                | E                  | X                          |

### Typical Electrical Performance



### ITF TEST JIG FOR LOW PASS FILTER 0805

#### GENERAL DESCRIPTION

These jigs are designed for testing the LPF0805 Low Pass Filters using a Vector Network Analyzer.

They consist of a dielectric substrate, having 50W microstrips as conducting lines and a bottom ground plane located at a distance of 0.254 mm from the microstrips.

The substrate used is RF-35-0100-C1B107 (or similar).

The connectors are SMA type (female), 'Johnson Components Inc.' Product P/N: 142-0701-841 (or similar).

Both a measurement jig and a calibration jig are provided.

The calibration jig is designed for a full 2-port calibration, and consists of an open line, short line and through line. LOAD calibration can be done by a 50W SMA termination.

#### MEASUREMENT PROCEDURE

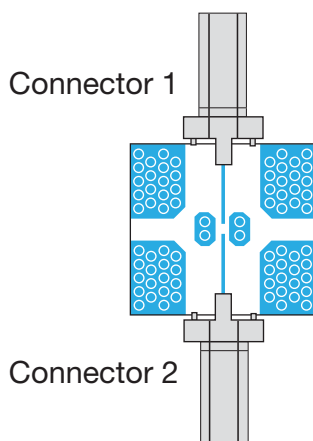
Follow the VNA's instruction manual and use the [calibration jig](#) to perform a full 2-Port calibration in the required bandwidths.

Solder the filter to the [measurement jig](#) as follows:

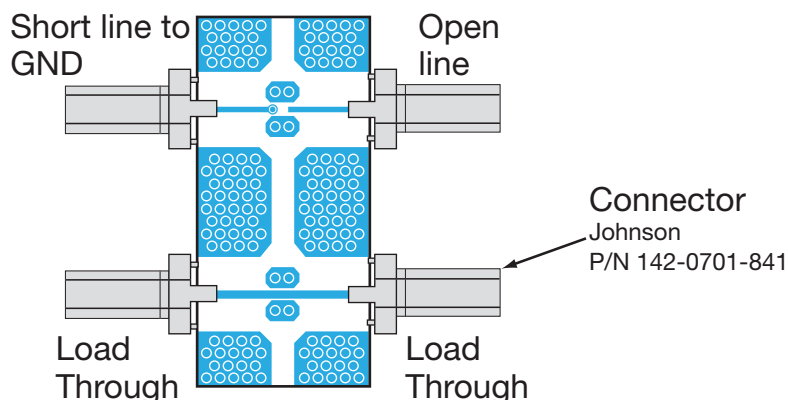
|                 |                     |              |             |
|-----------------|---------------------|--------------|-------------|
| Input (Filter)  | ➡ Connector 1 (Jig) | GND (Filter) | ➡ GND (Jig) |
| Output (Filter) | ➡ Connector 2 (Jig) | GND (Filter) | ➡ GND (Jig) |

Set the VNA to the relevant frequency band. Connect the VNA using a 10dB attenuator on the jig terminal connected to port 2 (using an RF cable).

**Measurement**



**Calibration Jig**



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- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
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- Комплексную поставку.
- Работу по проектам и поставку образцов.
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- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
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- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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