

# 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.

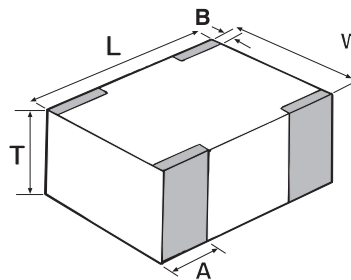
### FEATURES

- 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)



<b>L</b>	2.03±0.1 (0.080±0.004)
<b>W</b>	1.55±0.1 (0.061±0.004)
<b>T</b>	1.02±0.1 (0.040±0.004)
<b>A</b>	0.56±0.25 (0.022±0.010)
<b>B</b>	0.35±0.15 (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<sub>R</sub> 4 hours

### TERMINATION

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

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### HOW TO ORDER

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

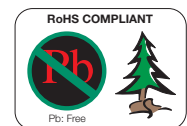
**0805A**  
T  
**Size**  
0805

**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

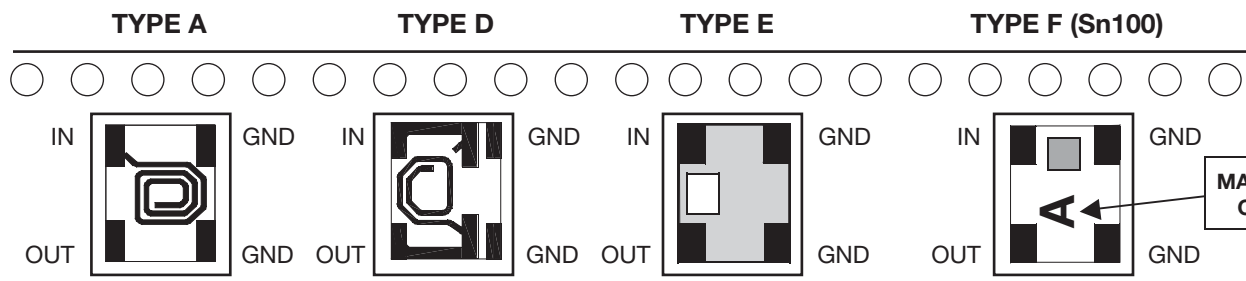
\*\*RoHS Compliant



Please select correct termination style

### TERMINALS AND LAYOUT (Top View)

#### Orientation in Tape



**MARKING CODE**

# Thin-Film Low Pass Filter

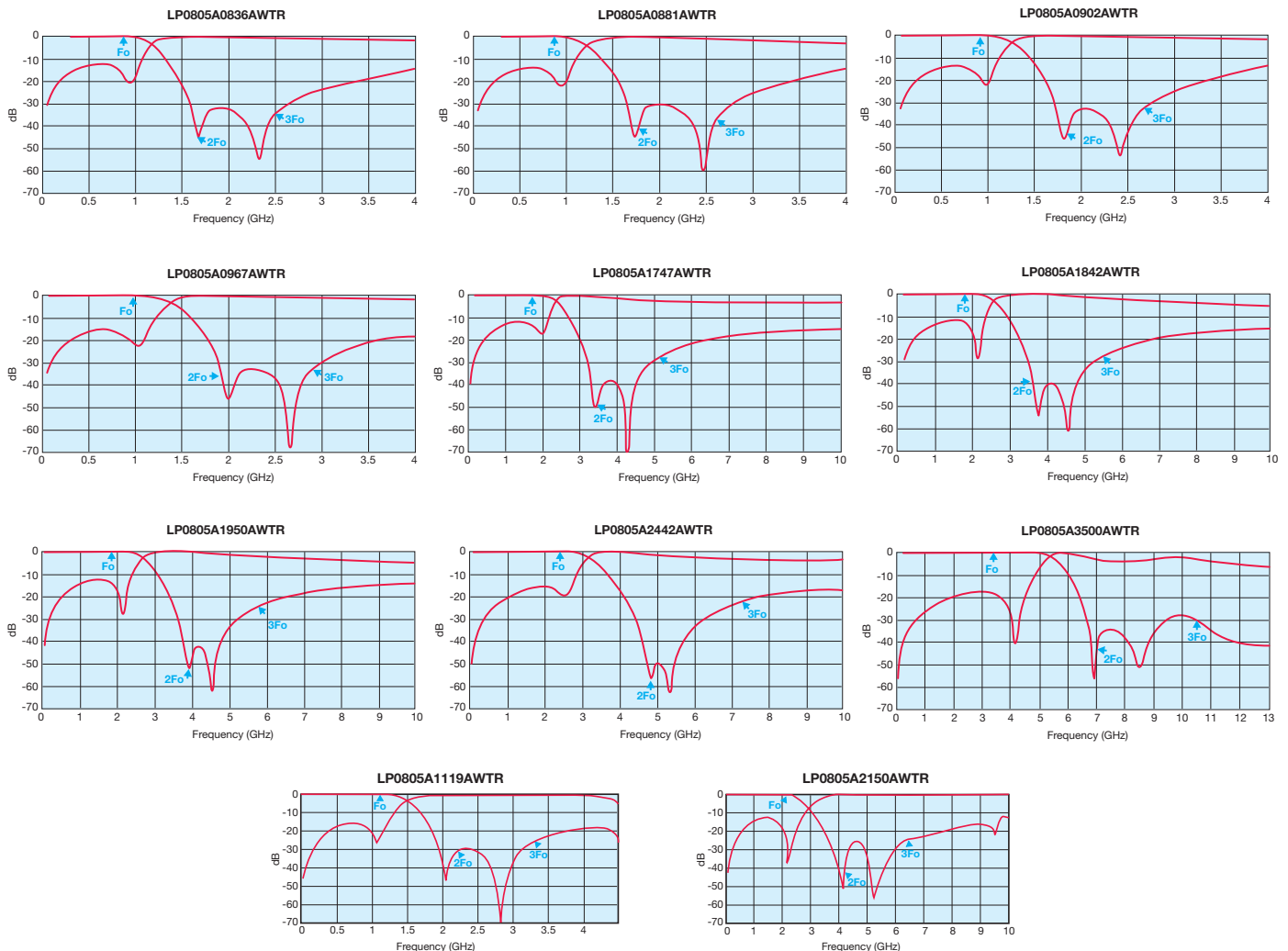


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### ELECTRICAL CHARACTERISTICS

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 (0.3dB typ)	1.7	30 @ 2X $F_o$ 20 @ 3x $F_o$	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



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# Thin-Film Low Pass Filter

## LP0805 Test Jig

### 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.

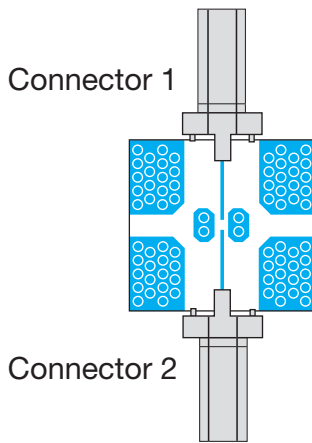
Solder the filter to the [measurement jig](#) as follows:

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

