

Version:  
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# **DIRECT**

## **Electronics Tech.**

### **(LTP)**

## **Ceramic Filters**

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## ▶ Product Introduction

### Introduction (LTP)

#### Features :

- Center frequency range between 450~470kHz are available standard tolerance of  $\pm 2$ kHz.
- Insert Loss (dB) max 5.0 db.

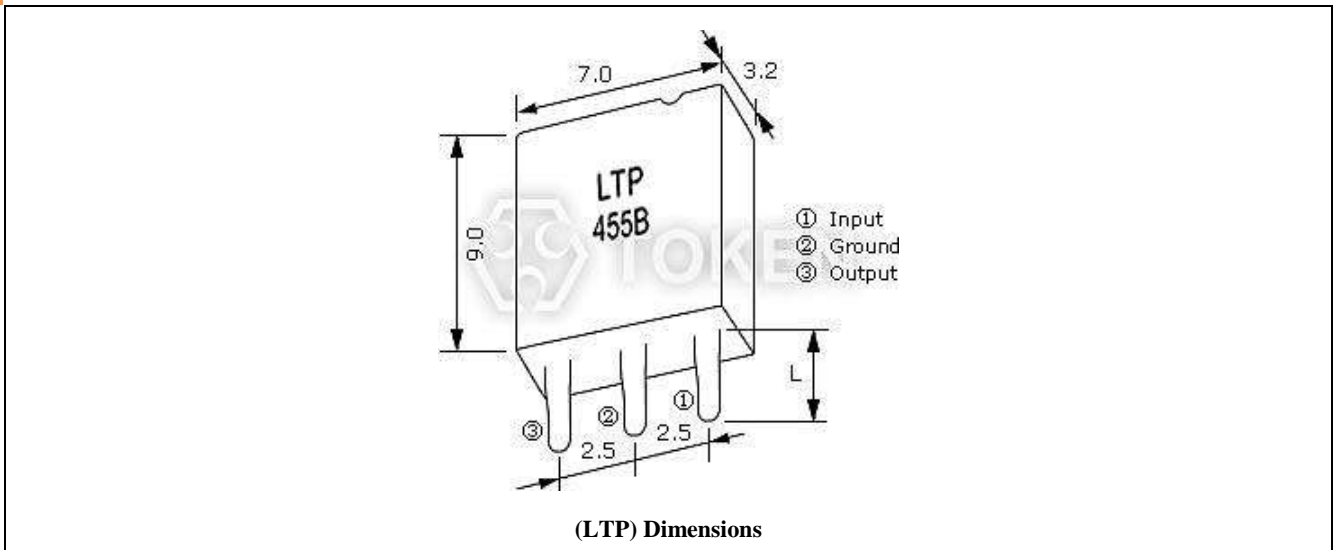
Direct Ceramic Filters for AM are Compatible Murata SFU450/455kHz. Direct ceramic filters are primarily designed for piezoelectric lines and conform to the RoHS directive and Lead-free. Ceramic (LTP) filters for AM series are designed to address the needs of standard AM filtering requirements. These filters are recommended for use in low cost products where economically, efficient designs are critical.

The (LTP) series for AM use is one of the most recommendable intermediate filters, having such distinctive features as high selectivity, high stability, and adjustment-free operation.

Additionally its easy matching with IC helps create an easy circuit design.

Direct (LTP) filters can supply you high performance, high quality and stability. The (LTP) series can be customized designs and tighter tolerances available on request. Application of filters specific designs also available including different piezo band-pass devices and Q specifications adjusted to frequency requirements. Contact us with your specific needs. For more information, please link to Direct official website "[Ceramic Filters](#)".

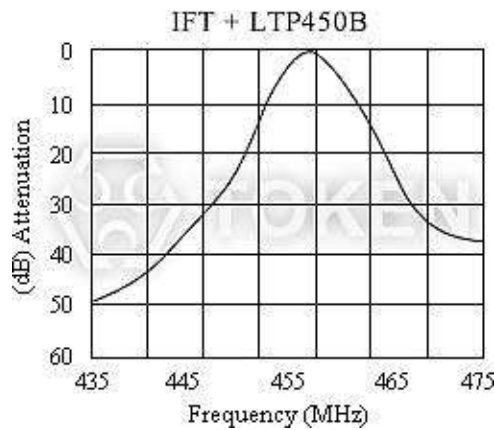


**► Dimensions****Dimensions (Unit: mm) (LTP)**

► **Technical Characteristics**

**Technical Characteristics (LTP)**

Part Number	3dB Band Width (kHz)	Center Frequency (fo) (kHz)	Selectivity (dB)min		Insert Loss (dB) max	Composition	Lead Length L (mm)	
			-9kHz off	+9kHz off			L1	L2
LTP455A	9.5±3	455±2	5.0	3.0	5.0	one element	3.6	5.0
LTP455B	9.5±3	462±2	5.0	3.0	5.0	one element with IFT		
LTP450BY	7±2	455±2	6.0	5.0	5.0			
LTP450BY1	4.5±1.5	452.5±2	9.0	8.0	5.0			

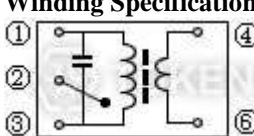


(LTP) Technical Characteristics

- Center Frequency (fo) is available in a range of 450~470kHz. The nominal frequency tolerance is ±2kHz.

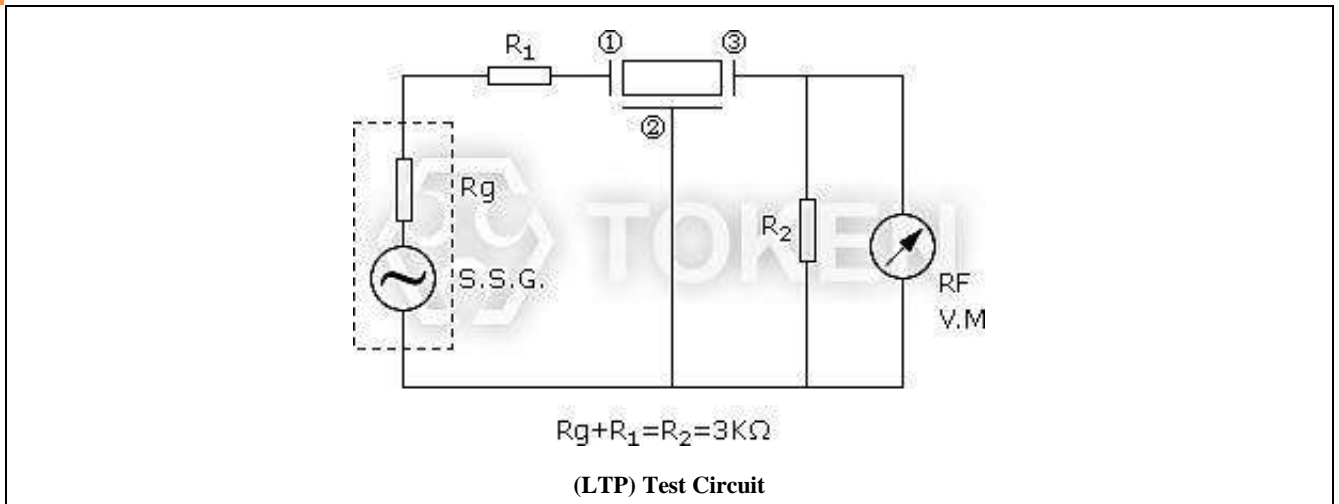
▶ **Recommended IFT**

**Recommended IFT (7mm Square) (LTP)**

Item	LTP 455B		
<b>Winding Specification</b>	①~②	②~③	④~⑥
 Form bottom	70T	115T	7T
unloaded Qu	105		
Tuning Capacity	108PF		

▶ **Test Circuit**

**Test Circuit (LTP)**



▶ **Order Codes**

**Order Codes (LTP)**

LTP455A	P
Part Number	Package



## ▶ General Information

### Introduction of Filters

For more than two decades, piezo technology has been instrumental in the proliferation of solid state electronics. A view of the future reveals that even greater expectations will be placed on piezoelectric material in the area of new applications and for more stringent performance criteria in modern products.

Direct sophisticated ceramics technology has greatly increased selectivity and wide-band characteristics, and has stabilized the characteristics of ceramic filters. The series covers a wide range of attenuation and bandwidths to allow selection of the most optimum filter characteristics for each application.

Direct filters are band pass filters consisting of one or more ceramic resonators connected in a ladder network configuration. Pass band characteristics are determined by the relative resonant and anti-resonant frequencies of the resonators. Both narrow and wide pass band configurations are manufactured by adjusting the resonator frequency characteristics.

The IC (Integrated Circuit) has found wide use in the field of commercial equipment, such as automotive radios, stereo systems, 2-way communications, TV sets, etc. Thus, new miniature integrated filters, with high performance, are extremely desirable for use in IF circuits.

Furthermore, radio wave disturbance due to rapid progress of data transmitting rate and remarkable sophistication of communication network have become significant traffic conflicts. Accordingly, the demand for filters with high selectivity and wide pass band width has boosted.

The IC application of the active elements will continue its progress, and there will be a growing demand for highly selective, non-adjustable, miniature and wide pass band width IF circuit.

### Advantage of Direct Piezoelectric Filters

Direct Electronics had been able to develop specialized piezo materials which when combined with an advance design have resulted in a complete line of practical, inexpensive piezo devices for entertainment and communications applications.

Direct reliably deliver high-quality components according to the each customer special needs with respect to performance, costs, and technology modifications.

For marketing discontinuations or sourcing activities concerning Piezoelectric Filter products, you are encouraged to contact our Sales Department so the request can be properly directed within Direct.

