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DIRECT

Electronics Tech.

(LTC455/450 U/W) Communication Ceramic Chip Filters

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▶ Product Introduction**Introduction (LTC455/450 U/W)****Features :**

- They are slim, at only 4.0mm max. thickness, and have a small mounting area enabling flexible PCB design.
- Operating temperature range: -20°C to +80°C.
- Can be reflow soldered and withstand washing.
- The bandwidth ranges from D to G.
- Mountable by automatic placers.

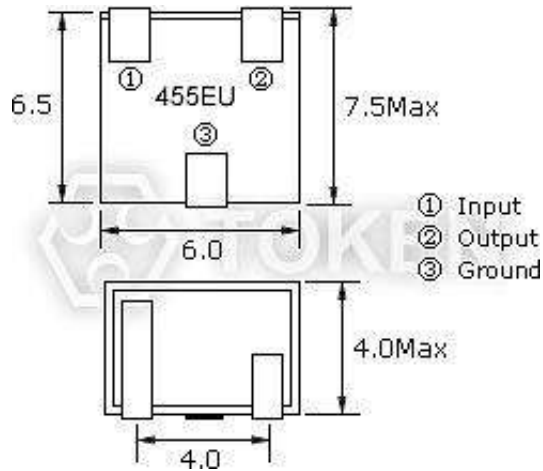
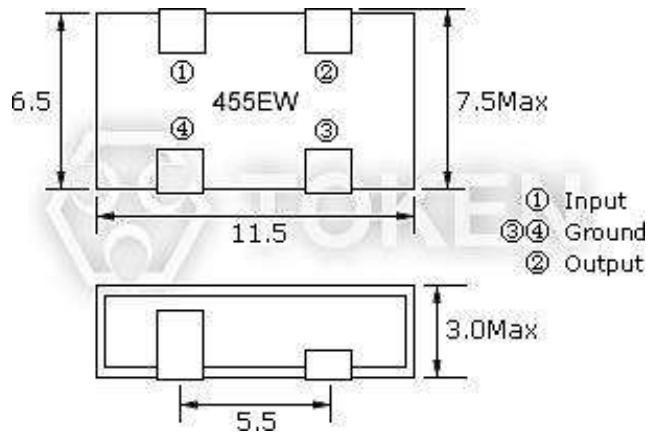
Direct (LTC455/450 U/W) surface mount communication ceramic chip filters are compatible with Murata filter CFUCG. The (LTC455/450 U/W) series for communication filter comprises small, high performance, thin (4.0mm) consisting of 4 ceramic elements. Their innovative construction is perfect for shrinking mobile communication products such as pocket pagers and cellular phones.

The surface mount LTC455/450 U/W 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.

With dimensions (7.5 × 6.0 mm) and 4.0 mm low profile, the LTC455/450 U/W filters have a small mounting area enabling flexible PCB design and are suitable for automatic placers. Standard Center Frequency is 455 kHz with tolerance ±1.5 and 450 kHz is also available. Pass Band Ripple (dB) max is 2db, Input / Output Impedance is 1000Ω and 1500Ω.

Custom parts are available on request. Direct will also produce devices outside these specifications to meet specific customer requirements, please contact our sales or link to Direct official website "[Ceramic Filters](#)" for more information.

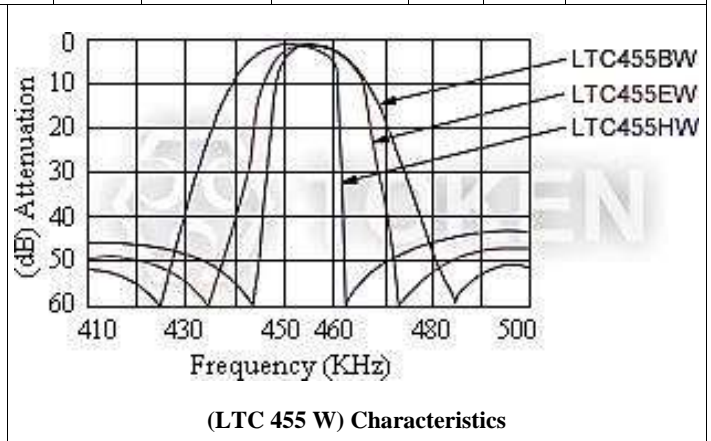
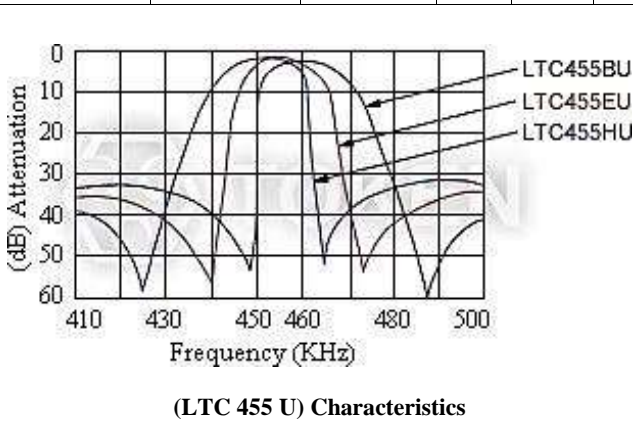


► Dimensions**Dimensions (Unit: mm) (LTC 455/450 U/W)****(LTC 455EU) Dimensions****(LTC 455EW) Dimensions**

► **Technical Characteristics**

Technical Characteristics (LTC 455/450 U/W)

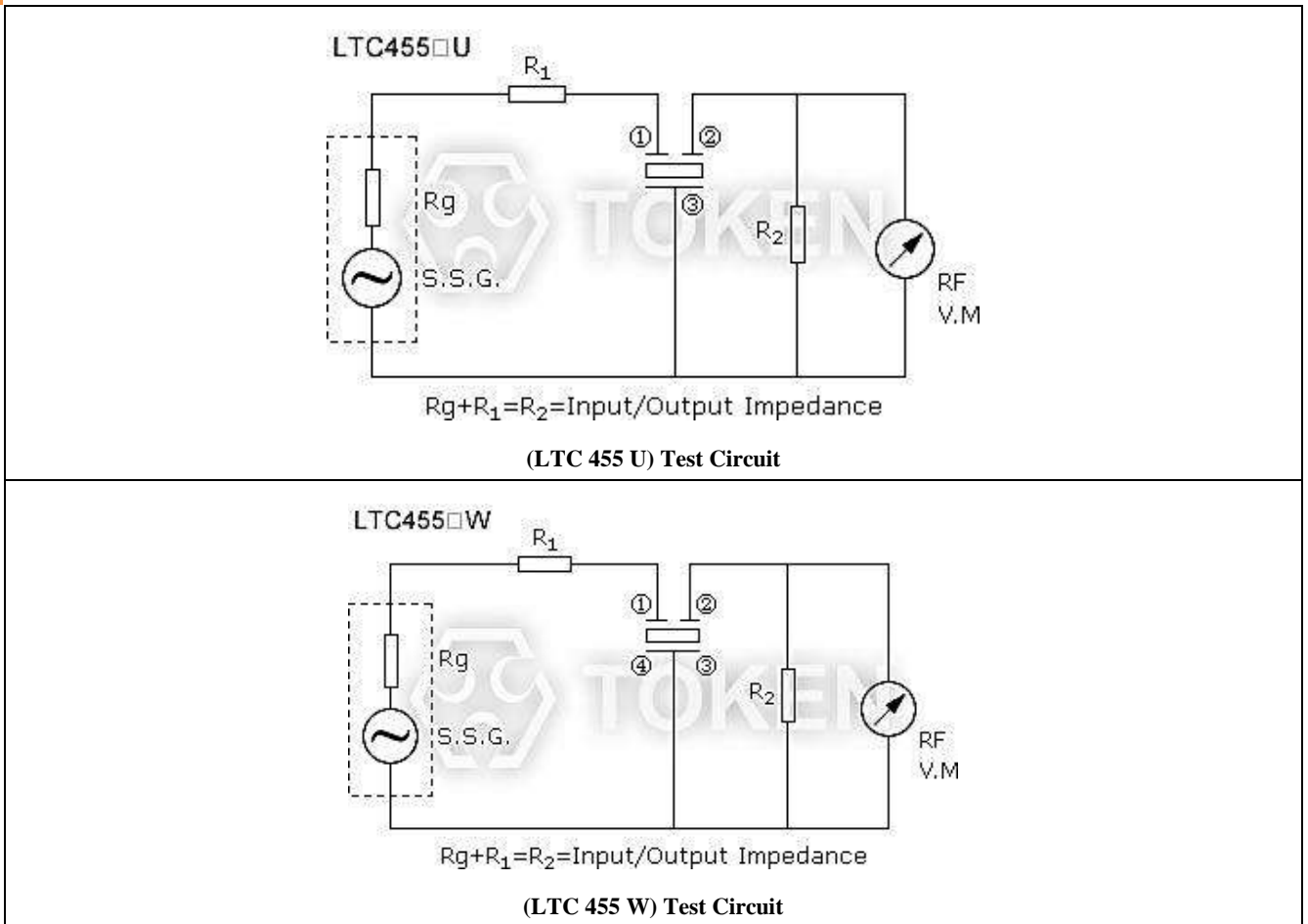
Part Number		Center Frequency (fo)(kHz)	Insertion Loss (dB)max		Pass Band Ripple (dB) max	6dB Band Width (kHz) min	40dB Band Width (kHz) max LTC455U	50dB Band Width (kHz) max LTC455W	Spurious Attenuation fo±100kHz (dB) min		Input / Output Impedance (Ω)
			LTC 455U	LTC 455W					LTC 455U	LTC 455W	
LTC455BU	LTC455BW	455±1.5	4	4	2	±15.0	±30	±30	27	50	1000
LTC455CU	LTC455CW	455±1.5	4	4	2	±12.5	±25	±25	27	50	1000
LTC455DU	LTC455DW	455±1.5	4	4	2	±10.0	±20	±20	27	50	1500
LTC455EU	LTC455EW	455±1.5	6	4	2	±7.5	±15	±15	27	50	1500
LTC455FU	LTC455FW	455±1.5	6	6	2	±6.0	±12	±12	27	47	1500
LTC455GU	LTC455GW	455±1.5	6	6	2	±4.5	±10	±10	25	47	1500
LTC455HU	LTC455HW	455±1.5	6	6	2	±3.0	±9.0	±9.0	25	47	1500
LTC455IU	LTC455IW	455±1.5	6	6	2	±2.0	±7.5	±7.5	25	47	1500



● Center frequency 450kHz is also available.

▶ **Test Circuit**

Test Circuit (LTC 455/450 U/W)



▶ **Order Codes**

Order Codes (LTC 455/450 U/W)

LTC455BU	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.

