

## FEATURES

- AM use
- RoHS Compliant (Note 7 exemption)

## OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

| PART NUMBER                     | 3dB BANDWIDTH (KHz) | SELECTIVITY -9 KHZ OFF (dB) MIN. | SELECTIVITY +9 KHZ OFF (dB) MIN. | INSERTION LOSS (dB) MAX. | COMPOSITION                     |
|---------------------------------|---------------------|----------------------------------|----------------------------------|--------------------------|---------------------------------|
| LPU455B - (connected with IFT)  | 10 ±3               | 5 (7.5)                          | 3 (5.5)                          | 5 (3)                    | 1 Element with IFT              |
| LPZ455JL - (connected with IFT) | 5.5 ±1              | 18 (20)                          | 18 (20)                          | 7 (3.5)                  | 2 Elements Direct Coupling Type |

- Center frequency (fo) is available in a range of 450 to 470KHz. The standard tolerance of fo is ±2KHz. For synthesizers and digital indicators, ±1KHz tolerance is also available.
  - The LPZ455JL series, with its two directly coupled elements, has a high degree of selectivity. The series features excellent matching characteristics for IFT.
- ( ) = Typical values

## PACKAGE DIMENSIONS (mm)

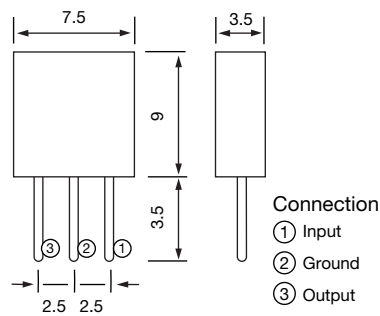


Figure 1) LPU455B – Front and Side views

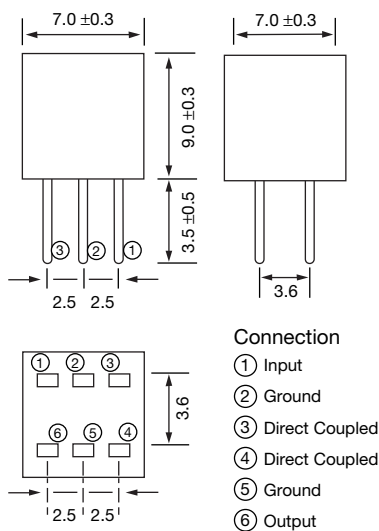


Figure 2) LPZ455JL – Front, Side and Bottom views

| ITEM \ TYPE            | LPU □□□B |       |     | LPZ □□□JL |      |      |
|------------------------|----------|-------|-----|-----------|------|------|
| WINDING SPECIFICATIONS | ①—②      | ②—③   | ④—⑥ | ①—②       | ②—③  | ④—⑥  |
|                        | 70 T     | 115 T | 7 T | 68 T      | 84 T | 14 T |
| UNLOADED Qu            | 105      |       |     | 90        |      |      |
| TUNING CAPACITY        | 180pF    |       |     | 180pF     |      |      |

Figure 3) Recommended IFT Specifications

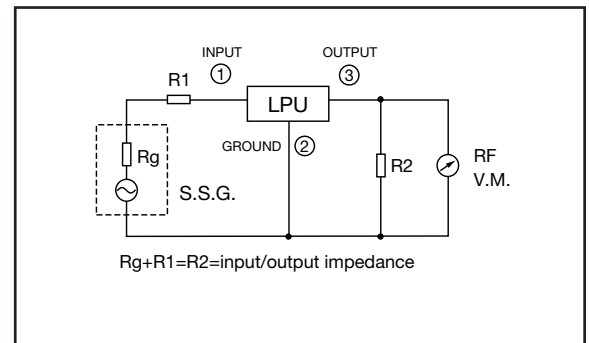


Figure 4) LPU Series – Measuring Circuit

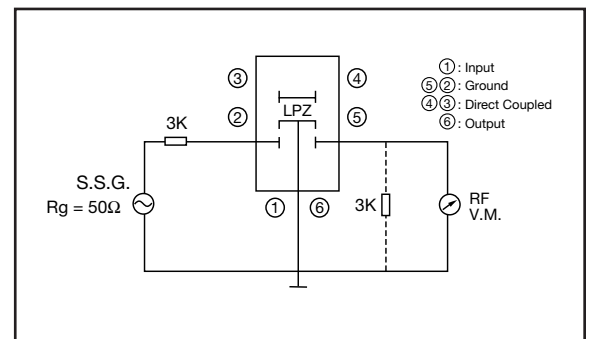


Figure 5) LPZ Series – Measuring Circuit



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**C E R A M I C R E S O N A T O R / F I L T E R**

**Application Information Request**

**Attention:** All Customers

**From:** Mike Huennekens, Director of Marketing and OEM Sales

**Subject:** Ceramic Resonator Application Information Request

ECS is requesting that you complete the section below that will allow us to determine if the specific application is suitable for the ceramic resonator/filters that you have requested.

Ceramic Resonators/Filters, both surface mount and through-hole type, are a much different frequency control solution than that of a crystal based device. Not only are there "matching" issues to specific integrated circuits and processors with ceramic based piezoelectric components but for multiple reasons ceramics are not the most advantageous nor robust frequency control solution for certain applications.

In addition, ECS does not approve the use of its ceramic products in Automotive, Military, Avionics, Life Sustaining or Life Support systems or any other related medical application.

**If the customer chooses to use this product in one or more of the noted applications without the written consent of ECS, Inc., ECS, Inc. shall be held harmless, and given release of liability and indemnification from claims of any nature.**

*Please complete the following and submit this form as soon as possible.*

|  |  |
|--|--|
| ECS Part Number  |  |
| Estimated Annual Usage   |  |
| Has this part already been approved for this application?  | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Has this part been ordered previously for this application?  | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| End Customer   |  |
| <p style="text-align: center;"><b>Application Details</b><br/> <u>You Must Be Specific</u> or this may be returned for more information.</p> |  |

I certify that the above information is true and correct to the best of my knowledge and acknowledge that ECS will be held harmless if this item is used in the restricted applications noted above.

\_\_\_\_\_  
 Company Name

\_\_\_\_\_  
 Print Your Name

\_\_\_\_\_  
 Title

\_\_\_\_\_  
 Signature

\_\_\_\_\_  
 Date

\*\* If this item will be used by a 3<sup>rd</sup> party ECS may require a form be completed and signed by all parties.

|   |                                      |             |                    |
|---|--------------------------------------|-------------|--------------------|
| <b>To be completed by ECS Inc., International</b> |                                      |             |                    |
| Approved: <input type="checkbox"/>                | Disallowed: <input type="checkbox"/> | Date: _____ | Approved By: _____ |

Please direct any further inquires to Brad Slatten at [brads@ecsxtal.com](mailto:brads@ecsxtal.com) or Carla Williams at [carlaw@ecsxtal.com](mailto:carlaw@ecsxtal.com) . We thank you for your understanding and patience in this process.