

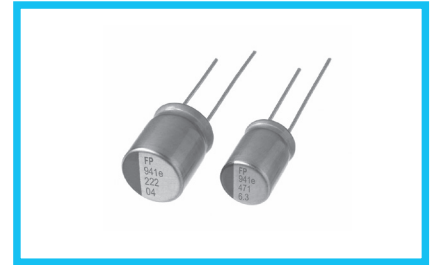
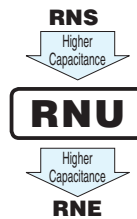
# RNU

High Capacitance



**FPCAP** *Expanded*

- Low ESR, High Capacitance, High ripple current.
- Load life of 2000/5000 hours at 105°C.
- Radial lead type : Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).



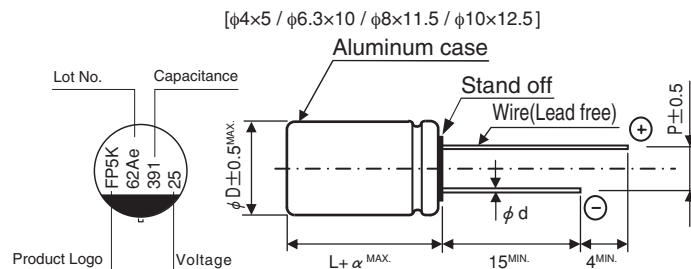
## Specifications

| Item                          | Performance Characteristics                                                                      |                                                   |
|-------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Category Temperature Range    | -55 to +105°C                                                                                    |                                                   |
| Rated Voltage Range           | 2.5 to 63V                                                                                       |                                                   |
| Rated Capacitance Range       | 10 to 2700μF                                                                                     |                                                   |
| Capacitance Tolerance         | ±20% at 120Hz, 20°C                                                                              |                                                   |
| Tangent of loss angle (tan δ) | Less than or equal to the specified value at 120Hz, 20°C                                         |                                                   |
| ESR (※1)                      | Less than or equal to the specified value at 100kHz, 20°C                                        |                                                   |
| Leakage Current (※2)          | Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20°C |                                                   |
| Endurance                     | Test condition                                                                                   | 105°C, rated voltage 2000 / 5000Hrs.              |
|                               | Capacitance change                                                                               | Within ±20% of initial value before test          |
|                               | tan δ                                                                                            | 150% or less than the initial specified value     |
|                               | ESR(※1)                                                                                          | 150% or less than the initial specified value     |
|                               | Leakage current (※2)                                                                             | Less than or equal to the initial specified value |

※1 ESR should be measured at both of the terminal ends closest to the capacitor body.

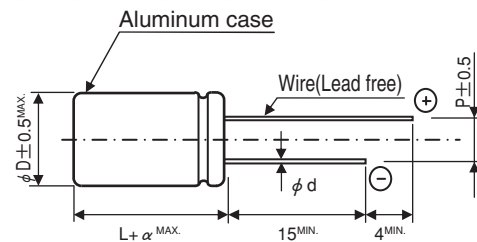
※2 Conditioning : If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

## Dimensions



[φ4×5 / φ6.3×10 / φ8×11.5 / φ10×12.5]

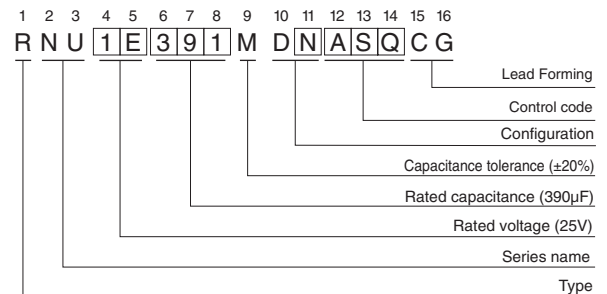
[φ4×5 / φ6.3×10 / φ8×11.5(-H or -5KH)]



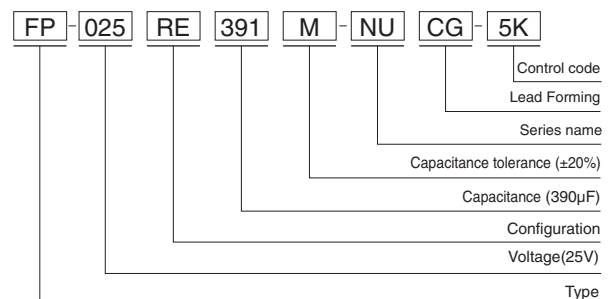
| φD×L    | φd   | P   | α   |
|---------|------|-----|-----|
| 4×5     | 0.45 | 1.5 | 1.0 |
| 6.3×10  | 0.5  | 2.5 | 1.0 |
| 8×11.5  | 0.6  | 3.5 | 1.5 |
| 10×12.5 | 0.6  | 5.0 | 1.5 |

Type numbering system (Example : 25V 390μF)

Nichicon part number



FPCAP part number



## Frequency coefficient of rated ripple current

| Frequency   | 120 Hz | 1 kHz | 10 kHz | 100 kHz | 300 kHz |
|-------------|--------|-------|--------|---------|---------|
| Coefficient | 0.10   | 0.45  | 0.50   | 1.00    | 1.00    |

**RNU**

## ■ Dimensions

| Rated Voltage<br>(V)<br>(code) | Surge<br>Voltage<br>(V) | Rated<br>Capacitance<br>(μF) | Case Size<br>φD×L (mm) | tan δ | Leakage<br>Current<br>(μA, 2min.) | ESR<br>(mΩ)<br>(20°C/100kHz) | Rated Ripple<br>Current<br>(mA <sub>rms</sub> )<br>(105°C/100kHz) | NICHICON         | FPCAP                 |
|--------------------------------|-------------------------|------------------------------|------------------------|-------|-----------------------------------|------------------------------|-------------------------------------------------------------------|------------------|-----------------------|
| 2.5<br>(0E)                    | 2.8                     | 1500                         | 8×11.5                 | 0.08  | 938                               | 7                            | 4700                                                              | RNU0E152MDN1□□   | FP-2R5RE152M-NU□□     |
|                                |                         | 1500                         | 8×11.5                 | 0.08  | 938                               | 7                            | 4700                                                              | RNU0E152MCN1□□   | FP-2R5RE152M-NU□□-H   |
|                                |                         | 2700                         | 10×12.5                | 0.08  | 1350                              | 7                            | 6100                                                              | RNU0E272MDN1□□   | FP-2R5RE272M-NU□□     |
| 4.0<br>(0G)                    | 4.6                     | 820                          | 8×11.5                 | 0.08  | 656                               | 7                            | 5700                                                              | RNU0G821MDN1□□   | FP-4R0RE821M-NU□□     |
|                                |                         | 820                          | 8×11.5                 | 0.08  | 656                               | 7                            | 5700                                                              | RNU0G821MCN1□□   | FP-4R0RE821M-NU□□-H   |
|                                |                         | 1000                         | 8×11.5                 | 0.08  | 800                               | 7                            | 5700                                                              | RNU0G102MDN1□□   | FP-4R0RE102M-NU□□     |
|                                |                         | 1000                         | 8×11.5                 | 0.08  | 800                               | 7                            | 5700                                                              | RNU0G102MCN1□□   | FP-4R0RE102M-NU□□-H   |
|                                |                         | 1200                         | 8×11.5                 | 0.08  | 960                               | 7                            | 5700                                                              | RNU0G122MDN1□□   | FP-4R0RE122M-NU□□     |
|                                |                         | 1200                         | 8×11.5                 | 0.08  | 960                               | 7                            | 5700                                                              | RNU0G122MCN1□□   | FP-4R0RE122M-NU□□-H   |
|                                |                         | 1800                         | 10×12.5                | 0.08  | 1440                              | 7                            | 6100                                                              | RNU0G182MDN1□□   | FP-4R0RE182M-NU□□     |
|                                |                         | 2200                         | 10×12.5                | 0.08  | 1760                              | 7                            | 6100                                                              | RNU0G222MDN1□□   | FP-4R0RE222M-NU□□     |
| 6.3<br>(0J)                    | 7.2                     | 220                          | 6.3×10                 | 0.08  | 277                               | 20                           | 3200                                                              | RNU0J221MDN1□□   | FP-6R3RE221M-NU□□     |
|                                |                         | 220                          | 6.3×10                 | 0.08  | 277                               | 20                           | 3200                                                              | RNU0J221MCN1□□   | FP-6R3RE221M-NU□□-H   |
|                                |                         | 470                          | 8×11.5                 | 0.08  | 592                               | 7                            | 5700                                                              | RNU0J471MDN1□□   | FP-6R3RE471M-NU□□     |
|                                |                         | 470                          | 8×11.5                 | 0.08  | 592                               | 7                            | 5700                                                              | RNU0J471MCN1□□   | FP-6R3RE471M-NU□□-H   |
|                                |                         | 680                          | 8×11.5                 | 0.08  | 857                               | 7                            | 5700                                                              | RNU0J681MDN1□□   | FP-6R3RE681M-NU□□     |
|                                |                         | 680                          | 8×11.5                 | 0.08  | 857                               | 7                            | 5700                                                              | RNU0J681MCN1□□   | FP-6R3RE681M-NU□□-H   |
|                                |                         | 820                          | 8×11.5                 | 0.08  | 1033                              | 7                            | 5700                                                              | RNU0J821MDN1□□   | FP-6R3RE821M-NU□□     |
|                                |                         | 820                          | 8×11.5                 | 0.08  | 1033                              | 7                            | 5700                                                              | RNU0J821MCN1□□   | FP-6R3RE821M-NU□□-H   |
|                                |                         | 1000                         | 8×11.5                 | 0.08  | 1260                              | 7                            | 5700                                                              | RNU0J102MDN1□□   | FP-6R3RE102M-NU□□     |
|                                |                         | 1000                         | 8×11.5                 | 0.08  | 1260                              | 7                            | 5700                                                              | RNU0J102MCN1□□   | FP-6R3RE102M-NU□□-H   |
|                                |                         | 1200                         | 8×11.5                 | 0.08  | 1512                              | 9                            | 6100                                                              | RNU0J122MDN1□□   | FP-6R3RE122M-NU□□     |
|                                |                         | 1200                         | 8×11.5                 | 0.08  | 1512                              | 9                            | 6100                                                              | RNU0J122MCN1□□   | FP-6R3RE122M-NU□□-H   |
|                                |                         | 1500                         | 10×12.5                | 0.08  | 1890                              | 7                            | 6100                                                              | RNU0J152MDN1□□   | FP-6R3RE152M-NU□□     |
|                                |                         |                              |                        |       |                                   |                              |                                                                   |                  |                       |
| 10<br>(1A)                     | 11.5                    | 10                           | 4×5                    | 0.12  | 300                               | 220                          | 700                                                               | RNU1A100MDN1□□   | FP-010RE100M-NU□□     |
|                                |                         | 10                           | 4×5                    | 0.12  | 300                               | 220                          | 700                                                               | RNU1A100MCN1□□   | FP-010RE100M-NU□□-H   |
|                                |                         | * 10                         | 4×5                    | 0.12  | 300                               | 220                          | 700                                                               | RNU1A100MDNASQ□□ | FP-010RE100M-NU□□-5K  |
|                                |                         | * 10                         | 4×5                    | 0.12  | 300                               | 220                          | 700                                                               | RNU1A100MCNASQ□□ | FP-010RE100M-NU□□-5KH |
|                                |                         | 820                          | 8×11.5                 | 0.08  | 1640                              | 10                           | 5800                                                              | RNU1A821MDN1□□   | FP-010RE821M-NU□□     |
|                                |                         | 820                          | 8×11.5                 | 0.08  | 1640                              | 10                           | 5800                                                              | RNU1A821MCN1□□   | FP-010RE821M-NU□□-H   |
|                                |                         | * 820                        | 8×11.5                 | 0.08  | 1640                              | 10                           | 5800                                                              | RNU1A821MDNASQ□□ | FP-010RE821M-NU□□-5K  |
|                                |                         | * 820                        | 8×11.5                 | 0.08  | 1640                              | 10                           | 5800                                                              | RNU1A821MCNASQ□□ | FP-010RE821M-NU□□-5KH |
| 16<br>(1C)                     | 18.4                    | 100                          | 6.3×10                 | 0.08  | 320                               | 25                           | 2820                                                              | RNU1C101MDN1□□   | FP-016RE101M-NU□□     |
|                                |                         | 100                          | 6.3×10                 | 0.08  | 320                               | 25                           | 2820                                                              | RNU1C101MCN1□□   | FP-016RE101M-NU□□-H   |
|                                |                         | * 100                        | 6.3×10                 | 0.08  | 320                               | 25                           | 2820                                                              | RNU1C101MDNASQ□□ | FP-016RE101M-NU□□-5K  |
|                                |                         | * 100                        | 6.3×10                 | 0.08  | 320                               | 25                           | 2820                                                              | RNU1C101MCNASQ□□ | FP-016RE101M-NU□□-5KH |
|                                |                         | 180                          | 8×11.5                 | 0.08  | 576                               | 8                            | 5700                                                              | RNU1C181MDN1□□   | FP-016RE181M-NU□□     |
|                                |                         | 180                          | 8×11.5                 | 0.08  | 576                               | 8                            | 5700                                                              | RNU1C181MCN1□□   | FP-016RE181M-NU□□-H   |
|                                |                         | 270                          | 8×11.5                 | 0.08  | 864                               | 8                            | 5000                                                              | RNU1C271MDN1□□   | FP-016RE271M-NU□□     |
|                                |                         | 270                          | 8×11.5                 | 0.08  | 864                               | 8                            | 5000                                                              | RNU1C271MCN1□□   | FP-016RE271M-NU□□-H   |
|                                |                         | * 270                        | 8×11.5                 | 0.08  | 864                               | 8                            | 5000                                                              | RNU1C271MDNASQ□□ | FP-016RE271M-NU□□-5K  |
|                                |                         | * 270                        | 8×11.5                 | 0.08  | 864                               | 8                            | 5000                                                              | RNU1C271MCNASQ□□ | FP-016RE271M-NU□□-5KH |
|                                |                         | 330                          | 8×11.5                 | 0.08  | 1056                              | 8                            | 6100                                                              | RNU1C331MDN1□□   | FP-016RE331M-NU□□     |
|                                |                         | 330                          | 8×11.5                 | 0.08  | 1056                              | 8                            | 6100                                                              | RNU1C331MCN1□□   | FP-016RE331M-NU□□-H   |
|                                |                         | 470                          | 10×12.5                | 0.08  | 1504                              | 10                           | 6100                                                              | RNU1C471MDN1□□   | FP-016RE471M-NU□□     |
|                                |                         | * 470                        | 10×12.5                | 0.08  | 1504                              | 10                           | 6100                                                              | RNU1C471MDNASQ□□ | FP-016RE471M-NU□□-5K  |
|                                |                         | 680                          | 10×12.5                | 0.08  | 2176                              | 10                           | 6100                                                              | RNU1C681MDN1□□   | FP-016RE681M-NU□□     |
| 20<br>(1D)                     | 23                      | 390                          | 8×11.5                 | 0.12  | 1560                              | 14                           | 4970                                                              | RNU1D391MDN1□□   | FP-020RE391M-NU□□     |
|                                |                         | 390                          | 8×11.5                 | 0.12  | 1560                              | 14                           | 4970                                                              | RNU1D391MCN1□□   | FP-020RE391M-NU□□-H   |
|                                |                         | * 390                        | 8×11.5                 | 0.12  | 1560                              | 14                           | 4970                                                              | RNU1D391MDNASQ□□ | FP-020RE391M-NU□□-5K  |
|                                |                         | * 390                        | 8×11.5                 | 0.12  | 1560                              | 14                           | 4970                                                              | RNU1D391MCNASQ□□ | FP-020RE391M-NU□□-5KH |
|                                |                         | 680                          | 10×12.5                | 0.12  | 2720                              | 12                           | 5400                                                              | RNU1D681MDN1□□   | FP-020RE681M-NU□□     |

\*: Load life 5000hours.

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.

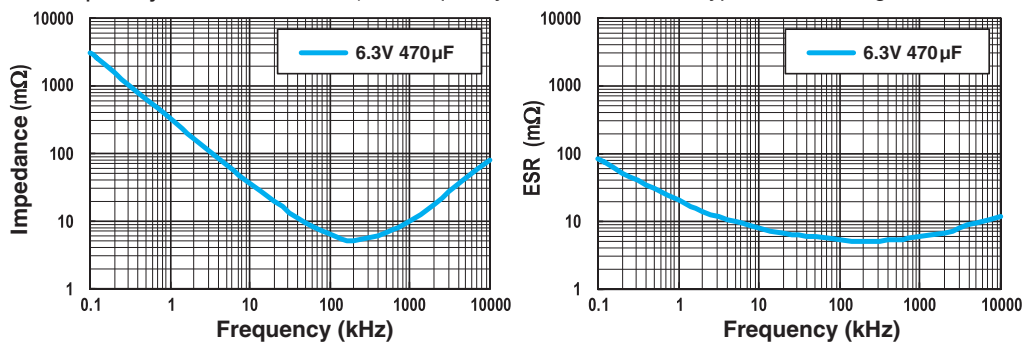
**RNU**

## ■ Dimensions

| Rated Voltage<br>(V)<br>(code) | Surge<br>Voltage<br>(V) | Rated<br>Capacitance<br>(μF) | Case Size<br>φD×L (mm) | tan δ | Leakage<br>Current<br>(μA, 2min.) | ESR<br>(mΩ)<br>(20°C/100kHz) | Rated Ripple<br>Current<br>(mA rms)<br>(105°C/100kHz) | NICHICON         | FPCAP                 |
|--------------------------------|-------------------------|------------------------------|------------------------|-------|-----------------------------------|------------------------------|-------------------------------------------------------|------------------|-----------------------|
| 25<br>(1E)                     | 28.7                    | 33                           | 8×11.5                 | 0.12  | 413                               | 24                           | 3600                                                  | RNU1E330MDN1□□   | FP-025RE330M-NU□□     |
|                                |                         | 33                           | 8×11.5                 | 0.12  | 413                               | 24                           | 3600                                                  | RNU1E330MCN1□□   | FP-025RE330M-NU□□-H   |
|                                |                         | 47                           | 8×11.5                 | 0.12  | 588                               | 24                           | 3600                                                  | RNU1E470MDN1□□   | FP-025RE470M-NU□□     |
|                                |                         | 47                           | 8×11.5                 | 0.12  | 588                               | 24                           | 3600                                                  | RNU1E470MCN1□□   | FP-025RE470M-NU□□-H   |
|                                |                         | 68                           | 8×11.5                 | 0.12  | 850                               | 24                           | 3600                                                  | RNU1E680MDN1□□   | FP-025RE680M-NU□□     |
|                                |                         | 68                           | 8×11.5                 | 0.12  | 850                               | 24                           | 3600                                                  | RNU1E680MCN1□□   | FP-025RE680M-NU□□-H   |
|                                |                         | 180                          | 8×11.5                 | 0.12  | 900                               | 16                           | 4650                                                  | RNU1E181MDN1□□   | FP-025RE181M-NU□□     |
|                                |                         | 180                          | 8×11.5                 | 0.12  | 900                               | 16                           | 4650                                                  | RNU1E181MCN1□□   | FP-025RE181M-NU□□-H   |
|                                |                         | 220                          | 8×11.5                 | 0.12  | 1100                              | 16                           | 4650                                                  | RNU1E221MDN1□□   | FP-025RE221M-NU□□     |
|                                |                         | 220                          | 8×11.5                 | 0.12  | 1100                              | 16                           | 4650                                                  | RNU1E221MCN1□□   | FP-025RE221M-NU□□-H   |
|                                |                         | * 220                        | 8×11.5                 | 0.12  | 1100                              | 16                           | 4650                                                  | RNU1E221MDNASQ□□ | FP-025RE221M-NU□□-5K  |
|                                |                         | * 220                        | 8×11.5                 | 0.12  | 1100                              | 16                           | 4650                                                  | RNU1E221MCNASQ□□ | FP-025RE221M-NU□□-5KH |
|                                |                         | 330                          | 10×12.5                | 0.12  | 1650                              | 14                           | 5000                                                  | RNU1E331MDN1□□   | FP-025RE331M-NU□□     |
|                                |                         | * 330                        | 10×12.5                | 0.12  | 1650                              | 14                           | 5000                                                  | RNU1E331MDNASQ□□ | FP-025RE331M-NU□□-5K  |
| 35<br>(1V)                     | 40.2                    | 390                          | 10×12.5                | 0.12  | 1950                              | 14                           | 5000                                                  | RNU1E391MDN1□□   | FP-025RE391M-NU□□     |
|                                |                         | * 390                        | 10×12.5                | 0.12  | 1950                              | 14                           | 5000                                                  | RNU1E391MDNASQ□□ | FP-025RE391M-NU□□-5K  |
|                                |                         | 47                           | 8×11.5                 | 0.12  | 329                               | 24                           | 3600                                                  | RNU1V470MDN1□□   | FP-035RE470M-NU□□     |
|                                |                         | 47                           | 8×11.5                 | 0.12  | 329                               | 24                           | 3600                                                  | RNU1V470MCN1□□   | FP-035RE470M-NU□□-H   |
|                                |                         | * 82                         | 8×11.5                 | 0.12  | 574                               | 20                           | 4000                                                  | RNU1V820MDNASQ□□ | FP-035RE820M-NU□□-5K  |
|                                |                         | * 82                         | 8×11.5                 | 0.12  | 574                               | 20                           | 4000                                                  | RNU1V820MCNASQ□□ | FP-035RE820M-NU□□-5KH |
| 50<br>(1H)                     | 57.5                    | * 120                        | 10×12.5                | 0.12  | 840                               | 18                           | 4400                                                  | RNU1V121MDNASQ□□ | FP-035RE121M-NU□□-5K  |
|                                |                         | 150                          | 10×12.5                | 0.12  | 1050                              | 20                           | 3800                                                  | RNU1V151MDN1□□   | FP-035RE151M-NU□□     |
|                                |                         | 39                           | 8×11.5                 | 0.12  | 390                               | 20                           | 2400                                                  | RNU1H390MDN1□□   | FP-050RE390M-NU□□     |
|                                |                         | 39                           | 8×11.5                 | 0.12  | 390                               | 20                           | 2400                                                  | RNU1H390MCN1□□   | FP-050RE390M-NU□□-H   |
| 63<br>(1J)                     | 72.5                    | 47                           | 10×12.5                | 0.12  | 470                               | 24                           | 2700                                                  | RNU1H470MDN1□□   | FP-050RE470M-NU□□     |
|                                |                         | 68                           | 10×12.5                | 0.12  | 680                               | 24                           | 2700                                                  | RNU1H680MDN1□□   | FP-050RE680M-NU□□     |
|                                |                         | 33                           | 8×11.5                 | 0.12  | 416                               | 26                           | 2300                                                  | RNU1J330MDN1□□   | FP-063RE330M-NU□□     |
|                                |                         | 33                           | 8×11.5                 | 0.12  | 416                               | 26                           | 2300                                                  | RNU1J330MCN1□□   | FP-063RE330M-NU□□-H   |
|                                |                         | 39                           | 10×12.5                | 0.12  | 492                               | 25                           | 2600                                                  | RNU1J390MDN1□□   | FP-063RE390M-NU□□     |
|                                |                         | 47                           | 10×12.5                | 0.12  | 592                               | 25                           | 2600                                                  | RNU1J470MDN1□□   | FP-063RE470M-NU□□     |
|                                |                         | 56                           | 10×12.5                | 0.12  | 706                               | 25                           | 2600                                                  | RNU1J560MDN1□□   | FP-063RE560M-NU□□     |

\* : Load life 5000hours.

## ■ Frequency Characteristics (The frequency characteristics are typical and not a guaranteed value.)



- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

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