



Micro Commercial Components



Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

P6KE6.8
THRU
P6KE540(C)A

600WATTS TRANSIENT
VOLTAGE SUPPRESSOR
6.8 TO 540 VOLTS

Features

- Economical series
Available in both unidirectional and bidirectional construction and suffix "C" designates bidirectional type
Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
600 watts peak pulse power dissipation and 5.8-459V VWM
UL Recognized File # E222849

- Epoxy meets UL 94 V-0 flammability rating
Moisture Sensitivity Level 1
POLARITY: Banded denotes cathode. Bidirectional not marked.
WEIGHT: 0.4 Gram(Appx.).
MOUNTING POSITION: Any.

Maximum Ratings

Peak Pulse Power Dissipation at 25°C: 600Watts
Steady State Power Dissipation: 5 Watts at TL=75 °C
3/8" Lead Length
tclamping (0 Volts to BV Min.):
Unidirectional < 1x10^-12 Seconds; Bidirectional < 5x10^-9 Seconds.
Operating and Storage Temperature: -55°C to +175°C

APPLICATION

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, automotive and telecommunication.

DO-15

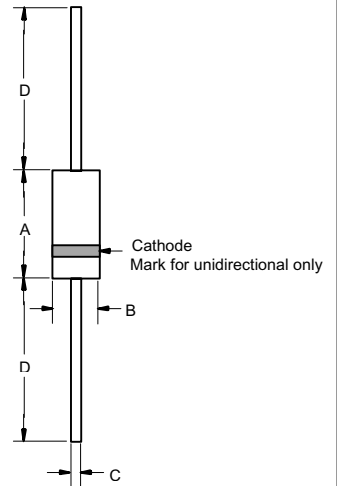


Table with 6 columns: DIM, INCHES (MIN, MAX), MM (MIN, MAX), NOTE. Rows for dimensions A, B, C, D.

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

## RATINGS AND CHARACTERISTICS CURVES

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

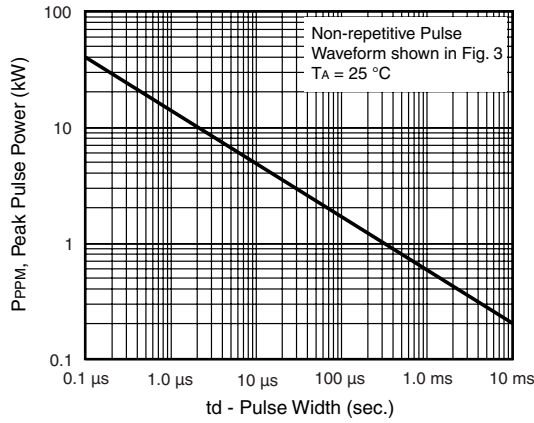


Figure 1. Peak Pulse Power Rating Curve

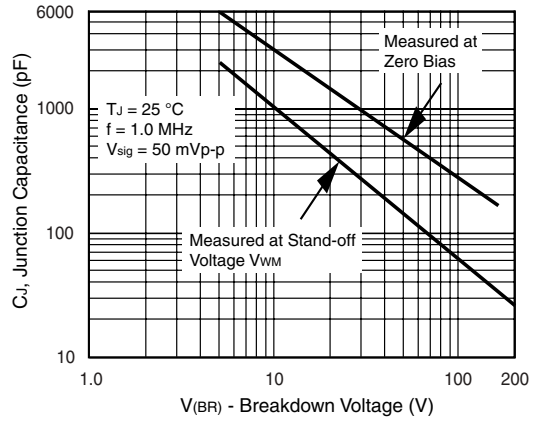


Figure 4. Typical Junction Capacitance Uni-Directional

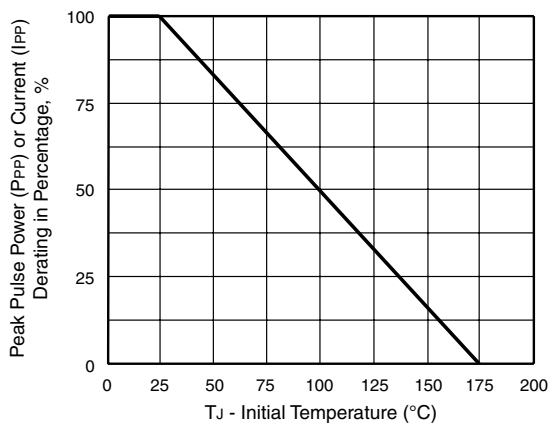


Figure 2. Pulse Power or Current versus Initial Junction Temperature

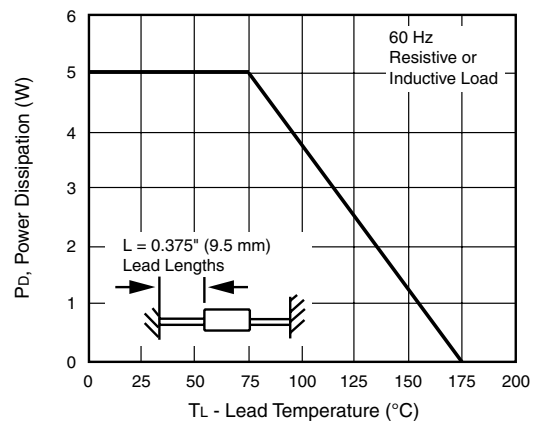


Figure 5. Power Derating Curve

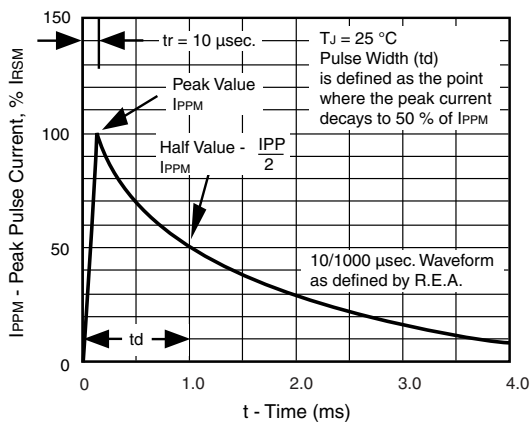


Figure 3. Pulse Waveform

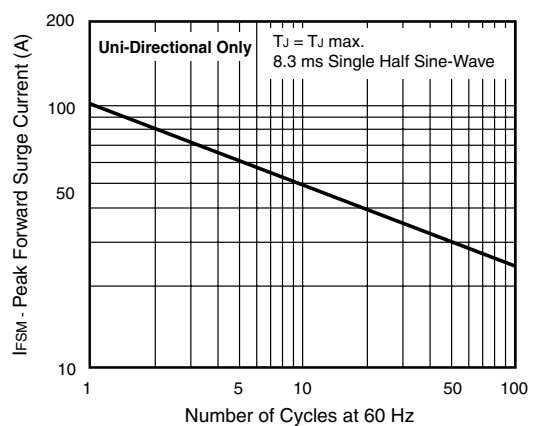


Figure 6. Maximum Non-Repetitive Forward Surge Current

# P6KE6.8 thru P6KE540A



Micro Commercial Components

| MCC<br>PART NUMBER | BREAKDOWN<br>VOLTAGE<br>$V_{(BR)} @ I_T$ |     |      | TEST<br>CURRENT<br>$I_T$ | RATED<br>STANDOFF<br>VOLTAGE<br>$V_{WM}$ | MAXIMUM<br>REVERSE<br>LEAKAGE<br>$I_D @ V_{WM}$ | MAXIMUM<br>CLAMPING<br>VOLTAGE<br>$V_C @ I_{PP}$ | MAXIMUM<br>PEAK<br>PULSE<br>CURRENT<br>$I_{PP}$ | MAX. TEMP<br>COEFFICIENT OF<br>$V_{BR}$<br>$V_{(BR)} (TA)$<br>-55°C TO 100°C |
|--------------------|--|-----|------|--------------------------|--|---|--|---|--|
|                    | (VOLTS)                                  |     |      |                          |  |   |  |   |  |
|                    | MIN                                      | NOM | MAX  | mADC                     | V  | ( $\mu A$ )                                     | V  | A   | % / °C   |
| P6KE6.8            | 6.12                                     | 6.8 | 7.48 | 10                       | 5.5                                      | 1000  | 10.8   | 56  | .057   |
| P6KE6.8A           | 6.45                                     | 6.8 | 7.14 | 10                       | 5.8                                      | 1000  | 10.5   | 57  | .057   |
| P6KE7.5            | 6.75                                     | 7.5 | 8.25 | 10                       | 6.05                                     | 500   | 11.7   | 51  | .061   |
| P6KE7.5A           | 7.13                                     | 7.5 | 7.88 | 10                       | 6.4                                      | 500   | 11.3   | 53  | .061   |
| P6KE8.2            | 7.38                                     | 8.2 | 9.02 | 10                       | 6.63                                     | 200   | 12.5   | 48  | .065   |
| P6KE8.2A           | 7.79                                     | 8.2 | 8.61 | 10                       | 7.02                                     | 200   | 12.1   | 50  | .065   |
| P6KE9.1            | 8.19                                     | 9.1 | 10   | 1                        | 7.37                                     | 50  | 13.8   | 44  | .068   |
| P6KE9.1A           | 8.65                                     | 9.1 | 9.55 | 1                        | 7.78                                     | 50  | 13.4   | 45  | .068   |
| P6KE10             | 9.0                                      | 10  | 11   | 1                        | 8.1                                      | 10  | 15   | 40  | .073   |
| P6KE10A            | 9.5                                      | 10  | 10.5 | 1                        | 8.55                                     | 10  | 14.5   | 41  | .073   |
| P6KE11             | 9.9                                      | 11  | 12.1 | 1                        | 8.92                                     | 5   | 16.2   | 37  | .075   |
| P6KE11A            | 10.5                                     | 11  | 11.6 | 1                        | 9.4                                      | 5   | 15.6   | 38  | .075   |
| P6KE12             | 10.8                                     | 12  | 13.2 | 1                        | 9.72                                     | 5   | 17.3   | 35  | .078   |
| P6KE12A            | 11.4                                     | 12  | 12.6 | 1                        | 10.2                                     | 5   | 16.7   | 36  | .078   |
| P6KE13             | 11.7                                     | 13  | 14.3 | 1                        | 10.5                                     | 5   | 19   | 32  | .081   |
| P6KE13A            | 12.4                                     | 13  | 13.7 | 1                        | 11.1                                     | 5   | 18.2   | 33  | .081   |
| P6KE15             | 13.5                                     | 15  | 16.5 | 1                        | 12.1                                     | 5   | 22   | 27  | .084   |
| P6KE15A            | 14.3                                     | 15  | 15.8 | 1                        | 12.8                                     | 5   | 21.2   | 28  | .084   |
| P6KE16             | 14.4                                     | 16  | 17.6 | 1                        | 12.9                                     | 5   | 23.5   | 26  | .086   |
| P6KE16A            | 15.2                                     | 16  | 16.8 | 1                        | 13.6                                     | 5   | 22.5   | 27  | .086   |
| P6KE18             | 16.2                                     | 18  | 19.8 | 1                        | 14.5                                     | 5   | 26.5   | 23  | .088   |
| P6KE18A            | 17.1                                     | 18  | 18.9 | 1                        | 15.3                                     | 5   | 25.2   | 24  | .088   |
| P6KE20             | 18                                       | 20  | 22   | 1                        | 16.2                                     | 5   | 29.1   | 21  | .090   |
| P6KE20A            | 19                                       | 20  | 21   | 1                        | 17.1                                     | 5   | 27.7   | 22  | .090   |
| P6KE22             | 19.8                                     | 22  | 24.2 | 1                        | 17.8                                     | 5   | 31.9   | 19  | .092   |
| P6KE22A            | 20.9                                     | 22  | 23.1 | 1                        | 18.8                                     | 5   | 30.6   | 20  | .092   |
| P6KE24             | 21.6                                     | 24  | 26.4 | 1                        | 19.4                                     | 5   | 34.7   | 17  | .094   |
| P6KE24A            | 22.8                                     | 24  | 25.2 | 1                        | 20.5                                     | 5   | 33.2   | 18  | .094   |
| P6KE27             | 24.3                                     | 27  | 29.7 | 1                        | 21.8                                     | 5   | 39.1   | 15  | .096   |
| P6KE27A            | 25.7                                     | 27  | 28.4 | 1                        | 23.1                                     | 5   | 37.5   | 16  | .096   |
| P6KE30             | 27                                       | 30  | 33   | 1                        | 24.3                                     | 5   | 43.5   | 14  | .097   |
| P6KE30A            | 28.5                                     | 30  | 31.5 | 1                        | 25.6                                     | 5   | 41.4   | 14.4  | .097   |
| P6KE33             | 29.7                                     | 33  | 36.3 | 1                        | 26.8                                     | 5   | 47.7   | 12.6  | .098   |
| P6KE33A            | 31.4                                     | 33  | 34.7 | 1                        | 28.2                                     | 5   | 45.7   | 13.2  | .098   |
| P6KE36             | 32.4                                     | 36  | 39.6 | 1                        | 29.1                                     | 5   | 52   | 11.6  | .099   |
| P6KE36A            | 34.2                                     | 36  | 37.8 | 1                        | 30.8                                     | 5   | 49.9   | 12  | .099   |
| P6KE39             | 35.1                                     | 39  | 42.9 | 1                        | 31.6                                     | 5   | 56.4   | 10.6  | .100   |
| P6KE39A            | 37.1                                     | 39  | 41   | 1                        | 33.3                                     | 5   | 53.9   | 11.2  | .100   |
| P6KE43             | 38.7                                     | 43  | 47.3 | 1                        | 34.8                                     | 5   | 61.9   | 9.6   | .101   |
| P6KE43A            | 40.9                                     | 43  | 45.2 | 1                        | 36.8                                     | 5   | 59.3   | 10.1  | .101   |
| P6KE47             | 42.3                                     | 47  | 51.7 | 1                        | 38.1                                     | 5   | 67.8   | 8.9   | .101   |
| P6KE47A            | 44.7                                     | 47  | 49.4 | 1                        | 40.2                                     | 5   | 64.8   | 9.3   | .101   |
| P6KE51             | 45.9                                     | 51  | 56.1 | 1                        | 41.3                                     | 5   | 73.5   | 8.2   | .102   |
| P6KE51A            | 48.5                                     | 51  | 53.6 | 1                        | 43.6                                     | 5   | 70.1   | 8.6   | .102   |
| P6KE56             | 50.4                                     | 56  | 61.6 | 1                        | 45.4                                     | 5   | 80.5   | 7.4   | .103   |
| P6KE56A            | 53.2                                     | 56  | 58.8 | 1                        | 47.8                                     | 5   | 77   | 7.8   | .103   |
| P6KE62             | 55.8                                     | 62  | 68.2 | 1                        | 50.2                                     | 5   | 89   | 6.8   | .104   |
| P6KE62A            | 58.9                                     | 62  | 65.1 | 1                        | 53                                       | 5   | 85   | 7.1   | .104   |
| P6KE68             | 61.2                                     | 68  | 74.8 | 1                        | 55.1                                     | 5   | 98   | 6.1   | .104   |
| P6KE68A            | 64.6                                     | 68  | 71.4 | 1                        | 58.1                                     | 5   | 92   | 6.5   | .104   |

# P6KE6.8 thru P6KE540A



Micro Commercial Components

| MCC<br>PART NUMBER | BREAKDOWN<br>VOLTAGE<br>$V_{(BR)} @ I_T$<br>(VOLTS) |     |      | TEST<br>CURRENT<br>$I_T$<br>mADC | RATED<br>STANDOFF<br>VOLTAGE<br>$V_{WM}$<br>V | MAXIMUM<br>REVERSE<br>LEAKAGE<br>$I_D @ V_{WM}$<br>( $\mu$ A) | MAXIMUM<br>CLAMPING<br>VOLTAGE<br>$V_C @ I_{PP}$<br>V | MAXIMUM<br>PEAK<br>PULSE<br>CURRENT<br>$I_{PP}$<br>A | MAX. TEMP<br>COEFFICIENT OF<br>$V_{BR}$<br>$V_{(BR)} (TA)$<br>-55°C TO 100°C<br>% / °C |
|--------------------|---|-----|------|----------------------------------|---|---|---|--|--|
|                    | MIN   | NOM | MAX  |                                  |   |   |   |  |  |
| P6KE75             | 67.5  | 75  | 82.5 | 1                                | 60.7  | 5   | 108   | 5.5  | .105   |
| P6KE75A            | 71.3  | 75  | 78.8 | 1                                | 64.1  | 5   | 103   | 5.8  | .105   |
| P6KE82             | 73.8  | 82  | 90.2 | 1                                | 66.4  | 5   | 118   | 5.1  | .105   |
| P6KE82A            | 77.9  | 82  | 86.1 | 1                                | 70.1  | 5   | 113   | 5.3  | .105   |
| P6KE91             | 81.9  | 91  | 100  | 1                                | 73.7  | 5   | 131   | 4.5  | .106   |
| P6KE91A            | 86.5  | 91  | 95.5 | 1                                | 77.8  | 5   | 125   | 4.8  | .106   |
| P6KE100            | 90  | 100 | 110  | 1                                | 81  | 5   | 144   | 4.2  | .106   |
| P6KE100A           | 95  | 100 | 105  | 1                                | 85.5  | 5   | 137   | 4.4  | .106   |
| P6KE110            | 99  | 110 | 121  | 1                                | 89.2  | 5   | 158   | 3.8  | .107   |
| P6KE110A           | 105   | 110 | 116  | 1                                | 94  | 5   | 152   | 4.0  | .107   |
| P6KE120            | 108   | 120 | 132  | 1                                | 97.2  | 5   | 173   | 3.5  | .107   |
| P6KE120A           | 114   | 120 | 126  | 1                                | 102   | 5   | 165   | 3.6  | .107   |
| P6KE130            | 117   | 130 | 143  | 1                                | 105   | 5   | 187   | 3.2  | .108   |
| P6KE130A           | 124   | 130 | 137  | 1                                | 111   | 5   | 179   | 3.3  | .108   |
| P6KE150            | 135   | 150 | 165  | 1                                | 121   | 5   | 215   | 2.8  | .108   |
| P6KE150A           | 143   | 150 | 158  | 1                                | 128   | 5   | 207   | 2.9  | .108   |
| P6KE160            | 144   | 160 | 176  | 1                                | 130   | 5   | 230   | 2.6  | .108   |
| P6KE160A           | 152   | 160 | 168  | 1                                | 136   | 5   | 219   | 2.7  | .108   |
| P6KE170            | 153   | 170 | 187  | 1                                | 138   | 5   | 244   | 2.5  | .108   |
| P6KE170A           | 161   | 170 | 179  | 1                                | 145   | 5   | 234   | 2.6  | .108   |
| P6KE180            | 162   | 180 | 198  | 1                                | 146   | 5   | 258   | 2.3  | .108   |
| P6KE180A           | 171   | 180 | 189  | 1                                | 154   | 5   | 246   | 2.4  | .108   |
| P6KE200            | 180   | 200 | 220  | 1                                | 162   | 5   | 287   | 2.1  | .108   |
| P6KE200A           | 190   | 200 | 210  | 1                                | 171   | 5   | 274   | 2.2  | .108   |
| P6KE220            | 198   | 220 | 242  | 1                                | 175   | 5   | 344   | 1.8  | .108   |
| P6KE220A           | 209   | 220 | 231  | 1                                | 185   | 5   | 328   | 1.9  | .108   |
| P6KE250            | 225   | 250 | 275  | 1                                | 202   | 5   | 360   | 1.7  | .110   |
| P6KE250A           | 237   | 250 | 263  | 1                                | 214   | 5   | 344   | 1.8  | .110   |
| P6KE300            | 270   | 300 | 330  | 1                                | 243   | 5   | 430   | 1.4  | .110   |
| P6KE300A           | 285   | 300 | 315  | 1                                | 256   | 5   | 414   | 1.5  | .110   |
| P6KE350            | 315   | 350 | 385  | 1                                | 284   | 5   | 504   | 1.2  | .110   |
| P6KE350A           | 332   | 350 | 368  | 1                                | 300   | 5   | 482   | 1.3  | .110   |
| P6KE400            | 360   | 400 | 440  | 1                                | 324   | 5   | 574   | 1.05   | .110   |
| P6KE400A           | 380   | 400 | 420  | 1                                | 342   | 5   | 548   | 1.1  | .110   |
| P6KE440            | 396   | 440 | 484  | 1                                | 356   | 5   | 631   | 0.99   | .110   |
| P6KE440A           | 418   | 440 | 462  | 1                                | 376   | 5   | 600   | 1.04   | .110   |
| P6KE480            | 432   | 480 | 528  | 1                                | 389   | 5   | 686   | 0.88   | .110   |
| P6KE480A           | 456   | 480 | 504  | 1                                | 408   | 5   | 658   | 0.91   | .110   |
| P6KE510            | 459   | 510 | 561  | 1                                | 413   | 5   | 729   | 0.82   | .110   |
| P6KE510A           | 485   | 510 | 535  | 1                                | 434   | 5   | 698   | 0.86   | .110   |
| P6KE540            | 486   | 510 | 594  | 1                                | 437   | 5   | 772   | 0.78   | .110   |
| P6KE540A           | 513   | 510 | 567  | 1                                | 459   | 5   | 740   | 0.81   | .110   |

Notes: For bidirectional types having  $V_{wm}$  of 10 Volts and less, the  $I_R$  limit is double.  
For parts without A, the  $V_{BR}$  is +/- 10%.



TM

Micro Commercial Components

### Ordering Information :

| Device         | Packing                      |
|----------------|------------------------------|
| Part Number-TP | Tape&Reel: 4Kpcs/Reel        |
| Part Number-AP | Ammo Packing: 3Kpcs/Ammo Box |
| Part Number-BP | Bulk: 25Kpcs/Carton          |

#### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages.

#### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

#### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

[www.mccsemi.com](http://www.mccsemi.com)

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А