

## Aluminum Capacitors Powerlytic<sup>®</sup>, Large Can



Fig. 1 Component Outlines

### FEATURES

- High capacitance per case size
- High ripple current
- Low leakage current
- Long shelf life and operating life
- Type 36D ratings recommended for replacement applications only. For new designs, see type 36DY.


**RoHS\***  
COMPLIANT

| QUICK REFERENCE DATA                        |   |
|---|---|
| DESCRIPTION                                 | VALUE   |
| Nominal case size<br>Ø D x L in inches (mm) | 1.453 x 2.250 (36.9 x 57.2)<br>to 3.078 x 8.750 (78.2 x 222.3)                    |
| Operating temperature                       | - 40 °C to + 85 °C (36DX)<br>- 40 °C to + 95 °C (36DE)                            |
| Rated capacitance range, C <sub>R</sub>     | 190 µF to 50 000 µF   |
| Tolerance on C <sub>R</sub>                 | + 75 %, - 10 % (10 WVDC to 100 WVDC)<br>+ 50 %, - 10 % (200 WVDC to 450 WVDC)     |
| Rated voltage range, U <sub>R</sub>         | 10 WVDC to 450 WVDC   |
| Life validation test at 85 °C               | 1000 h: ΔCAP ± 15 % from initial measurement. ΔESR 1.5 x initial specified limit. |

| DIMENSIONS in inches (millimeters) |                    |                    |                        |               |                        |                                     |                       |
|------------------------------------|--------------------|--------------------|------------------------|---------------|------------------------|-------------------------------------|-----------------------|
| LARGE CAN CAPACITORS               |                    |                    |                        |               |                        |                                     |                       |
| CASE CODE                          | NOMINAL            |                    | WITH INSULATING SLEEVE |               |                        | TERMINAL SPACING<br>M ± 0.016 (0.4) | TYPICAL WEIGHT<br>(g) |
|                                    | D<br>± 0.032 (0.8) | L<br>± 0.063 (1.6) | D<br>(Max.)            | L<br>(Max.)   | P TERMINAL<br>H (Max.) |                                     |                       |
| AN                                 | 1.375 (35.0)       | 1.625 (41.0)       | 1.453 (36.9)           | 1.750 (44.5)  | 1.849 (47.0)           | 0.500 (12.7)                        | 43.0                  |
| AY                                 | 1.375 (35.0)       | 1.875 (48.0)       | 1.453 (36.9)           | 2.000 (50.8)  | 1.099 (53.3)           | 0.500 (12.7)                        | 54.0                  |
| AA                                 | 1.375 (35.0)       | 2.125 (54.0)       | 1.453 (36.9)           | 2.250 (57.2)  | 1.349 (59.7)           | 0.500 (12.7)                        | 63.0                  |
| AM                                 | 1.375 (35.0)       | 2.625 (67.0)       | 1.453 (36.9)           | 2.750 (69.9)  | 1.849 (72.4)           | 0.500 (12.7)                        | 82.0                  |
| AB                                 | 1.375 (35.0)       | 3.125 (79.0)       | 1.453 (36.9)           | 3.250 (82.6)  | 1.349 (85.1)           | 0.500 (12.7)                        | 105.0                 |
| AL                                 | 1.375 (35.0)       | 3.625 (92.0)       | 1.453 (36.9)           | 3.750 (95.3)  | 1.849 (97.8)           | 0.500 (12.7)                        | 122.0                 |
| AC                                 | 1.375 (35.0)       | 4.125 (105.0)      | 1.453 (36.9)           | 4.250 (108.0) | 1.349 (110.5)          | 0.500 (12.7)                        | 129.0                 |
| AD                                 | 1.375 (35.0)       | 4.625 (117.0)      | 1.453 (36.9)           | 4.750 (120.7) | 1.849 (123.2)          | 0.500 (12.7)                        | 162.0                 |
| AE                                 | 1.375 (35.0)       | 5.125 (130.0)      | 1.453 (36.9)           | 5.250 (133.4) | 1.349 (125.9)          | 0.500 (12.7)                        | 179.0                 |
| AF                                 | 1.375 (35.0)       | 5.625 (143.0)      | 1.453 (36.9)           | 5.750 (146.1) | 1.849 (148.6)          | 0.500 (12.7)                        | 201.0                 |
| EN                                 | 1.750 (44.0)       | 1.625 (41.0)       | 1.828 (46.4)           | 1.750 (44.5)  | 1.849 (47.0)           | 0.750 (19.1)                        | 71.0                  |
| EY                                 | 1.750 (44.0)       | 1.875 (48.0)       | 1.828 (46.4)           | 2.000 (50.8)  | 2.099 (53.3)           | 0.750 (19.1)                        | 88.0                  |
| EA                                 | 1.750 (44.0)       | 2.125 (54.0)       | 1.828 (46.4)           | 2.250 (57.2)  | 2.349 (59.7)           | 0.750 (19.1)                        | 102.0                 |
| EM                                 | 1.750 (44.0)       | 2.625 (67.0)       | 1.828 (46.4)           | 2.750 (69.9)  | 2.849 (72.4)           | 0.750 (19.1)                        | 133.0                 |
| EB                                 | 1.750 (44.0)       | 3.125 (79.0)       | 1.828 (46.4)           | 3.250 (82.6)  | 3.349 (85.1)           | 0.750 (19.1)                        | 167.0                 |
| EL                                 | 1.750 (44.0)       | 3.625 (92.0)       | 1.828 (46.4)           | 3.750 (95.3)  | 3.849 (97.8)           | 0.750 (19.1)                        | 198.0                 |

**Note**

- To ensure delivery of lead (Pb)-free RoHS compliant parts during the transition period please contact your Vishay Sales office

\* Pb containing terminations are not RoHS compliant, exemptions may apply



| <b>DIMENSIONS</b> in inches (millimeters) |                    |                    |                        |               |                        |                                     |                       |
|---|--------------------|--------------------|------------------------|---------------|------------------------|-------------------------------------|-----------------------|
| <b>LARGE CAN CAPACITORS</b>               |                    |                    |                        |               |                        |                                     |                       |
| CASE CODE                                 | NOMINAL            |                    | WITH INSULATING SLEEVE |               |                        | TERMINAL SPACING<br>M ± 0.016 (0.4) | TYPICAL WEIGHT<br>(g) |
|   | D<br>± 0.032 (0.8) | L<br>± 0.063 (1.6) | D<br>(Max.)            | L<br>(Max.)   | P TERMINAL<br>H (Max.) |                                     |                       |
| EC  | 1.750 (44.0)       | 4.125 (105.0)      | 1.828 (46.4)           | 4.250 (108.0) | 4.349 (110.5)          | 0.750 (19.1)                        | 230.0                 |
| ED  | 1.750 (44.0)       | 4.625 (117.0)      | 1.828 (46.4)           | 4.750 (120.7) | 4.849 (123.2)          | 0.750 (19.1)                        | 252.0                 |
| EE  | 1.750 (44.0)       | 5.125 (130.0)      | 1.828 (46.4)           | 5.250 (133.4) | 5.349 (135.9)          | 0.750 (19.1)                        | 269.0                 |
| EF  | 1.750 (44.0)       | 5.625 (143.0)      | 1.828 (46.4)           | 5.750 (146.1) | 5.849 (148.6)          | 0.750 (19.1)                        | 318.0                 |
| BY  | 2.000 (51.0)       | 1.875 (48.0)       | 2.078 (52.8)           | 2.000 (50.8)  | 2.099 (53.3)           | 0.875 (22.2)                        | 113.0                 |
| BA  | 2.000 (51.0)       | 2.125 (54.0)       | 2.078 (52.8)           | 2.250 (57.2)  | 2.349 (59.7)           | 0.875 (22.2)                        | 133.0                 |
| BM  | 2.000 (51.0)       | 2.625 (67.0)       | 2.078 (52.8)           | 2.750 (69.9)  | 2.849 (72.4)           | 0.875 (22.2)                        | 176.0                 |
| BB  | 2.000 (51.0)       | 3.125 (79.0)       | 2.078 (52.8)           | 3.250 (82.6)  | 3.349 (85.1)           | 0.875 (22.2)                        | 213.0                 |
| BL  | 2.000 (51.0)       | 3.625 (92.0)       | 2.078 (52.8)           | 3.750 (95.3)  | 3.849 (97.8)           | 0.875 (22.2)                        | 261.0                 |
| BC  | 2.000 (51.0)       | 4.125 (105.0)      | 2.078 (52.8)           | 4.250 (108.0) | 4.349 (110.5)          | 0.875 (22.2)                        | 381.0                 |
| BD  | 2.000 (51.0)       | 4.625 (117.0)      | 2.078 (52.8)           | 4.750 (120.7) | 4.849 (123.2)          | 0.875 (22.2)                        | 326.0                 |
| BE  | 2.000 (51.0)       | 5.125 (130.0)      | 2.078 (52.8)           | 5.250 (133.4) | 5.349 (135.9)          | 0.875 (22.2)                        | 337.0                 |
| BF  | 2.000 (51.0)       | 5.625 (143.0)      | 2.078 (52.8)           | 5.750 (146.1) | 5.849 (148.6)          | 0.875 (22.2)                        | 408.0                 |
| CB  | 2.500 (64.0)       | 3.125 (79.0)       | 2.578 (65.5)           | 3.250 (82.6)  | N/A                    | 1.125 (28.6)                        | 329.0                 |
| CL  | 2.500 (64.0)       | 3.625 (92.0)       | 2.578 (65.5)           | 3.750 (95.3)  | N/A                    | 1.125 (28.6)                        | 400.0                 |
| CC  | 2.500 (64.0)       | 4.125 (105.0)      | 2.578 (65.5)           | 4.250 (108.0) | N/A                    | 1.125 (28.6)                        | 473.0                 |
| CD  | 2.500 (64.0)       | 4.625 (117.0)      | 2.578 (65.5)           | 4.750 (120.7) | N/A                    | 1.125 (28.6)                        | 562.0                 |
| CE  | 2.500 (64.0)       | 5.125 (130.0)      | 2.578 (65.5)           | 5.250 (133.4) | N/A                    | 1.125 (28.6)                        | 607.0                 |
| CF  | 2.500 (64.0)       | 5.625 (143.0)      | 2.578 (65.5)           | 5.750 (146.1) | N/A                    | 1.125 (28.6)                        | 675.0                 |
| DB  | 3.000 (76.0)       | 3.125 (79.0)       | 3.078 (78.2)           | 3.250 (82.6)  | N/A                    | 1.250 (31.8)                        | 496.0                 |
| DL  | 3.000 (76.0)       | 3.625 (92.0)       | 3.078 (78.2)           | 3.750 (95.3)  | N/A                    | 1.250 (31.8)                        | 598.0                 |
| DC  | 3.000 (76.0)       | 4.125 (105.0)      | 3.078 (78.2)           | 4.250 (108.0) | N/A                    | 1.250 (31.8)                        | 700.0                 |
| DD  | 3.000 (76.0)       | 4.625 (117.0)      | 3.078 (78.2)           | 4.750 (120.7) | N/A                    | 1.250 (31.8)                        | 802.0                 |
| DE  | 3.000 (76.0)       | 5.125 (130.0)      | 3.078 (78.2)           | 5.250 (133.4) | N/A                    | 1.250 (31.8)                        | 944.0                 |
| DF  | 3.000 (76.0)       | 5.625 (143.0)      | 3.078 (78.2)           | 5.750 (146.1) | N/A                    | 1.250 (31.8)                        | 1004.0                |
| DJ  | 3.000 (76.0)       | 8.625 (219.0)      | 3.078 (78.2)           | 8.750 (222.3) | N/A                    | 1.250 (31.8)                        | 1403.0                |

| <b>DIMENSIONS</b> in inches (millimeters) |              |              |                            |                              |                              |                         |
|---|--------------|--------------|----------------------------|------------------------------|------------------------------|-------------------------|
| <b>BRACKETS (RoHS COMPLIANT)</b>          |              |              |                            |                              |                              |                         |
| TYPE                                      | PART NUMBER  | A            | B                          | C                            | FIGURE NUMBER                |                         |
| 2 Feet                                    | 1245860035A  | 1.375 (34.9) | 1.781 (45.2)               | 2.218 (56.3)                 | 1                            |                         |
| 3 Feet                                    | 1245860036A  | 2.000 (50.8) | 2.500 (63.5)               | 2.875 (73.0)                 | 2                            |                         |
| 3 Feet                                    | 1245860037A  | 2.500 (63.5) | 3.000 (76.2)               | 3.375 (85.7)                 | 2                            |                         |
| 3 Feet                                    | 1245860038A  | 3.000 (76.2) | 3.500 (88.9)               | 3.875 (98.4)                 | 2                            |                         |
| <b>SCREW INSERT TERMINAL DIMENSIONS</b>   |              |              |                            |                              |                              |                         |
| TERMINAL CODE                             | THREAD       | THREAD DEPTH | HEIGHT<br>J ± 0.032 (0.81) | DIAMETER<br>S ± 0.010 (0.25) | DIAMETER<br>T ± 0.010 (0.25) | NOTES                   |
| A   | 10-32 NF-28  | 0.219 (5.6)  | 0.063 (1.6)                | 0.313 (8.0)                  | 0.438 (11.1)                 | All cases codes         |
| B   | 10-32 NF-28  | 0.375 (9.5)  | 0.250 (6.4)                | 0.313 (8.0)                  | 0.438 (11.1)                 | All cases codes         |
| D   | 1/4-28 NF-28 | 0.344 (8.7)  | 0.093 (2.4)                | 0.688 (17.5)                 | -                            | C and D dia. codes only |

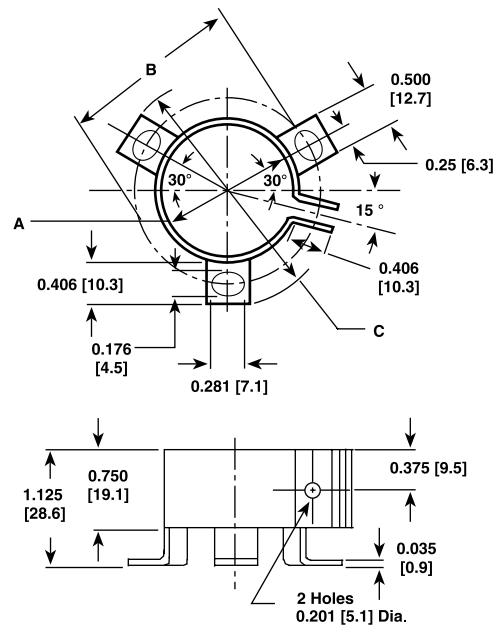


**DIMENSIONS AND AVAILABLE FORMS**

**Screw Insert Terminals**



**Large Can Brackets**



**ORDERING EXAMPLE**

Electrolytic capacitor 36DX series: 36DX 392 G 075 BB 2 A

| DESCRIPTION |   |
|-------------|---|
| CODE        | EXPLANATION                                     |
| 36DX        | Product type                                    |
| 392         | Capacitance value (3900 µF)                     |
| G           | Tolerance (G = - 10 %/+ 75 %; F = -10 %/+ 50 %) |
| 075         | Voltage rating at 85 °C (75 V)                  |
| BB          | Can size (see dimensions table)                 |
| 2           | PVC insulating sleeve                           |
| A           | Terminal code (low insert 10-32 screw thread)   |



| <b>ELECTRICAL DATA</b> (Original/improved ratings) |           |                 |
|--|-----------|-----------------|
| CAPACITANCE (μF)                                   | CASE CODE | PART NUMBER     |
| <b>TYPE 36D ORIGINAL RATINGS</b>                   |           |                 |
| <b>25 WVDC at + 85 °C, SURGE = 30 V</b>            |           |                 |
| 2700.0 <sup>(1)</sup>                              | AA        | 36D272G025AA2A  |
| 5500.0 <sup>(1)</sup>                              | AB        | 36D552G025AB2A  |
| <b>40 WVDC at + 85 °C, SURGE = 50 V</b>            |           |                 |
| 5500.0 <sup>(1)</sup>                              | AC        | 36D552G040AC2A  |
| 8400.0 <sup>(1)</sup>                              | BB        | 36D842G040BB2A  |
| <b>50 WVDC at + 85 °C, SURGE = 650 V</b>           |           |                 |
| 1300.0 <sup>(1)</sup>                              | AA        | 36D132G050AA2A  |
| 5200.0 <sup>(1)</sup>                              | AE        | 36D522G050AE2A  |
| <b>TYPE 36DE IMPROVED RATINGS</b>                  |           |                 |
| <b>25 WVDC at + 85 °C, SURGE = 30 V</b>            |           |                 |
| 40 000.0 <sup>(1)</sup>                            | BB        | 36DE403G025BB2A |
| <b>TYPE 36DE ORIGINAL RATINGS</b>                  |           |                 |
| <b>10 WVDC at + 85 °C, SURGE = 12 V</b>            |           |                 |
| 23 000.0 <sup>(1)</sup>                            | AA        | 36DE233G010AA2A |
| <b>40 WVDC at + 85 °C, SURGE = 50 V</b>            |           |                 |
| 24 000.0 <sup>(1)</sup>                            | BB        | 36DE243G040BB2A |
| <b>TYPE 36DX IMPROVED RATINGS</b>                  |           |                 |
| <b>200 WVDC at + 85 °C, SURGE = 250 V</b>          |           |                 |
| 850.0 <sup>(1)</sup>                               | AC        | 36DX851F200AC2A |
| 2000.0 <sup>(1)</sup>                              | BC        | 36DX202F200BC2A |
| 2800.0 <sup>(1)</sup>                              | BC        | 36DX282F200BC2A |
| 3400.0 <sup>(1)</sup>                              | CC        | 36DX342F200CC2A |
| 7400.0 <sup>(1)</sup>                              | DF        | 36DX742F200DF2A |
| <b>250 WVDC at + 85 °C, SURGE = 300 V</b>          |           |                 |
| 500.0 <sup>(1)</sup>                               | AB        | 36DX501F250AB2A |
| <b>350 WVDC at + 85 °C, SURGE = 400 V</b>          |           |                 |
| 260.0 <sup>(1)</sup>                               | AB        | 36DX261F350AB2A |
| 5100.0   | DJ        | 36DX512F350DJ2A |
| <b>450 WVDC at + 85 °C, SURGE = 525 V</b>          |           |                 |
| 230.0 <sup>(1)</sup>                               | AC        | 36DX231F450AC2A |
| 2000.0 <sup>(1)</sup>                              | DF        | 36DX202F450DF2A |
| <b>TYPE 36DX ORIGINAL RATINGS</b>                  |           |                 |
| <b>15 WVDC at + 85 °C, SURGE = 18 V</b>            |           |                 |
| 7500.0 <sup>(1)</sup>                              | AA        | 36DX752G015AA2A |
| 15 000.0 <sup>(1)</sup>                            | AB        | 36DX153G015AB2A |
| 22 000.0 <sup>(1)</sup>                            | AC        | 36DX223G015AC2A |
| 34 000.0 <sup>(1)</sup>                            | AF        | 36DX343G015AF2A |
| 50 000.0 <sup>(1)</sup>                            | BC        | 36DX503G015BC2A |
| <b>25 WVDC at + 85 °C, SURGE = 30 V</b>            |           |                 |
| 4500.0 <sup>(1)</sup>                              | AA        | 36DX452G025AA2A |
| 9000.0 <sup>(1)</sup>                              | AB        | 36DX902G025AB2A |
| 13 000.0 <sup>(1)</sup>                            | AC        | 36DX133G025AC2A |
| 30 000.0 <sup>(1)</sup>                            | BC        | 36DX303G025BC2A |
| 50 000.0 <sup>(1)</sup>                            | CC        | 36DX503G025CC2A |



| <b>ELECTRICAL DATA</b> (Original/improved ratings) |                  |                    |
|--|------------------|--------------------|
| <b>CAPACITANCE (μF)</b>                            | <b>CASE CODE</b> | <b>PART NUMBER</b> |
| <b>30 WVDC at + 85 °C, SURGE = 40 V</b>            |                  |                    |
| 4000.0 <sup>(1)</sup>                              | AA               | 36DX402G030AA2A    |
| 8000.0 <sup>(1)</sup>                              | AB               | 36DX802G030AB2A    |
| 18 000.0 <sup>(1)</sup>                            | AF               | 36DX183G030AF2A    |
| 26 000.0   | BC               | 36DX263G030BC2A    |
| <b>40 WVDC at + 85 °C, SURGE = 50 V</b>            |                  |                    |
| 2900.0 <sup>(1)</sup>                              | AA               | 36DX292G040AA2A    |
| 5800.0 <sup>(1)</sup>                              | AB               | 36DX582G040AB2A    |
| 8700.0 <sup>(1)</sup>                              | AC               | 36DX872G040AC2A    |
| 20 000.0 <sup>(1)</sup>                            | BC               | 36DX203G040BC2A    |
| 34 000.0 <sup>(1)</sup>                            | CC               | 36DX343G040CC2A    |
| <b>50 WVDC at + 85 °C, SURGE = 65 V</b>            |                  |                    |
| 2400.0 <sup>(1)</sup>                              | AA               | 36DX242G050AA2A    |
| 4800.0 <sup>(1)</sup>                              | AB               | 36DX482G050AB2A    |
| 7200.0 <sup>(1)</sup>                              | AC               | 36DX722G050AC2A    |
| 11 000.0   | AF               | 36DX113G050AF2A    |
| 16 000.0 <sup>(1)</sup>                            | BC               | 36DX163G050BC2A    |
| 24 000.0 <sup>(1)</sup>                            | BF               | 36DX243G050BF2A    |
| 40 000.0 <sup>(1)</sup>                            | CF               | 36DX403G050CF2A    |
| 41 000.0 <sup>(1)</sup>                            | DC               | 36DX413G050DC2A    |
| <b>75 WVDC at + 85 °C, SURGE = 95 V</b>            |                  |                    |
| 1400.0 <sup>(1)</sup>                              | AA               | 36DX142G075AA2A    |
| 10 000.0 <sup>(1)</sup>                            | BC               | 36DX103G075BC2A    |
| 17 000.0 <sup>(1)</sup>                            | CC               | 36DX173G075CC2A    |

**Note**

<sup>(1)</sup> This is representative of normally stocked ratings. Many other ratings are available.

Check your nearest stocking distributor. Additional Part Numbers normally found in distribution inventory include:

|                |                |                 |                 |
|----------------|----------------|-----------------|-----------------|
| 36D103G075CC2A | 36D231G013BB2A | 36D902G050BC2A  | 36DX332F350DF2A |
| 36D123G040BC2A | 36D262G050AB2A | 36DX103F250DJ2A | 36DX352F450DJ2A |
| 36D133G015AC2A | 36D392G050AC2A | 36DX172G100AB2A | 36DX372F350DF2A |
| 36D153G050CC2A | 36D392G075BB2A | 36DX203G025AF2A | 36DX422G075AC2A |
| 36D191F350AB2A | 36D602G050BB2A | 36DX312F450DJ2A |                 |



## Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.



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

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.