

Lower Voltage Ceramic Disc Capacitors 2 kV_{DC} to 7.5 kV_{DC}


FEATURES

- Low losses
- High capacitance in small sizes
- High stability
- Radial leads
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

APPLICATIONS

- Lighting ballasts
- SMPS
- DC and pulse high voltage

DESIGN

The capacitors consist of a ceramic disc of which both sides are silver-plated. Connection leads are made of tinned copper having diameters of 0.025" (0.64 mm) or 0.032" (0.81 mm).

The capacitors may be supplied with radial kinked or straight leads having lead spacing of 0.250" (6.35 mm) or 0.375" (9.5 mm) or 0.500" (12.7 mm).

The standard tolerances are ± 10 % or ± 20 %.

Coating is made of resin coating or flame retardant epoxy resin in accordance with "UL 94 V-0".

CAPACITANCE RANGE

10 pF to 0.10 μF

RATED VOLTAGE

 2 kV_{DC}
 3 kV_{DC}
 6 kV_{DC}
 7.5 kV_{DC}
DIELECTRIC STRENGTH BETWEEN LEADS

Component test:

 2 kV_{DC} 3500 V_{DC}, 2 s
 3 kV_{DC} 5000 V_{DC}, 2 s
 6 kV_{DC} 10 500 V_{DC}, 2 s
 7.5 kV_{DC} 11 250 V_{DC}, 2 s

CERAMIC DIELECTRIC

 C0G, U2J, R3L (Class 1)
 X7R, X5F, X5S, Y5S, Y5U, Y5V, Z5U (Class 2)

| LEAD OFFSET "LO" | |
|------------------|---------------------------------|
| NOMINAL | ~ THICKNESS - 0.100" |
| | 0.07" (1.8 mm) -565R20GAP10 |
| EXCEPTION | 0.08" (2.0 mm) -565R30GASS20 |
| | 0.10" (2.54 mm) -565R30GASS33 |

| QUICK REFERENCE DATA | | | | | | |
|----------------------------|--------------|---------------|-------------------------|-------------------------|--------------------|---------------|
| DESCRIPTION | VALUE | | | | | |
| Ceramic Class | 1 | 1 | 2 | 2 | 2 | 2 |
| Ceramic Dielectric | U2J, R3L | C0G, U2J, R3L | X7R, Y5S, Y5U, Z5U, Y5V | X7R, Y5S, Y5U, Z5U, Y5V | X5F, X5S, Y5U, Z5U | X5F, Y5U, Z5U |
| Voltage (V _{DC}) | 3000 | 6000 | 2000 | 3000 | 6000 | 7500 |
| Min. Capacitance (pF) | 10 | 10 | 100 | 47 | 100 | 100 |
| Max. Capacitance (pF) | 33 | 47 | 100 000 | 10 000 | 10 000 | 2500 |
| Mounting | Through hole | | | | | |

INSULATION RESISTANCE

 2 kV_{DC} min. 10 000 MΩ
 3 kV_{DC} min. 50 000 MΩ
 6 kV_{DC} min. 75 000 MΩ
 7.5 kV_{DC} min. 200 000 MΩ

TOLERANCE ON CAPACITANCE

± 10 %, ± 20 %, - 20 % to + 80 %

DISSIPATION FACTOR

 0.2 % max. at 1 MHz; 1 V
 2.0 % max. at 1 kHz; 1 V

CATEGORY TEMPERATURE RANGE

- 25 °C to + 85 °C

CLIMATIC CATEGORY ACC. TO EN60068-1

25/085/21

OPERATING TEMPERATURE RANGE

- 25 °C to + 105 °C



| ORDERING INFORMATION, CERAMIC 2 kV_{DC} | | | | | | | | | | | |
|--|--------------|----------------------------|-----------------------------|-------------------------------|--------------|--------------|------------------|-------------|----|--------------|--------------|
| C (pF) | TOL. (%) | D DIAMETER INCH (mm) | T THICKNESS INCH (mm) | LS LEAD SPACE INCH (mm) | WIRE SIZE | | ORDERING CODE | | | | |
| | | | | | AWG | INCH (mm) | | | | | |
| X7R | | | | | | | | | | | |
| 100 | ± 10 | 0.330 (8.4) | 0.190 (4.8) | 0.250 (6.4) | 20 | 0.032 (0.81) | 564R20TST10 | | | | |
| 220 | | | 0.180 (4.6) | | | | 564R20TST22 | | | | |
| 330 | | | 0.170 (4.3) | | | | 564R20TST33 | | | | |
| 470 | | | 0.185 (4.7) | | | | 564R20TST47 | | | | |
| 560 | | | 0.170 (4.3) | | | | 564R20TST56 | | | | |
| 680 | | | 0.175 (4.4) | | | | 564R20TST68 | | | | |
| 1000 | | 0.430 (10.9) | 0.160 (4.1) | | | | 564R20TSD10 | | | | |
| 1500 | | 0.460 (11.7) | 0.170 (4.3) | | | | 564R20TSD15 | | | | |
| 1800 | | 0.530 (13.5) | 0.170 (4.3) | | | | 564R20TSD18 | | | | |
| 2200 | | 0.530 (13.5) | 0.160 (4.1) | | | | 564R20TSD22 | | | | |
| 2700 | | 0.680 (17.3) | 0.170 (4.3) | | | | 564R20TSD27 | | | | |
| 3300 | | | | | | | 564R20TSD33 | | | | |
| 3900 | | | | | | | 564R20TSD39 | | | | |
| 4700 | | | | | | | 564R20TSD47 | | | | |
| | | | | | | | 0.375 (9.5) | 564R20TSD47 | | | |
| Y5S | | | | | | | | | | | |
| 1000 | ± 20 | 0.330 (8.4) | 0.175 (4.4) | 0.250 (6.4) | 20 | 0.032 (0.81) | 564R20TSSD10 | | | | |
| 1500 | | 0.400 (10.2) | 0.170 (4.3) | | | | 564R20TSSD15 | | | | |
| 1800 | | 0.430 (10.9) | | | | | 564R20TSSD18 | | | | |
| 2200 | | 0.460 (11.7) | | | | | 564R20TSSD22 | | | | |
| 2700 | | 0.530 (13.5) | | | | | 564R20TSSD27 | | | | |
| 3300 | | 0.620 (15.7) | 0.175 (4.4) | | | | 564R20TSSD33 | | | | |
| 3900 | | | | | | | 564R20TSSD39 | | | | |
| 4700 | | | | | | | 564R20TSSD47 | | | | |
| 5600 | | 0.680 (17.3) | 0.170 (4.3) | | | | 564R20TSSD56 | | | | |
| 6800 | | 0.720 (18.3) | | | | | 564R20TSSD68 | | | | |
| Y5U | | | | | | | | | | | |
| 1000 | ± 20 | 0.330 (8.4) | 0.170 (4.3) | 0.250 (6.4) | 20 | 0.032 (0.81) | 564R20GAD10 | | | | |
| 1500 | | 0.330 (8.4) | 0.170 (4.3) | | | | 564R20GAD15 | | | | |
| Z5U | | | | | | | | | | | |
| 1800 | ± 20 | 0.360 (9.1) | 0.170 (4.3) | 0.250 (6.4) | 20 | 0.032 (0.81) | 564R20GAD18 | | | | |
| 2200 | | 0.400 (10.2) | 0.175 (4.4) | | | | 564R20GAD22 | | | | |
| 2700 | | 0.430 (10.9) | | | | | 564R20GAD27 | | | | |
| 3300 | | 0.490 (12.4) | | | | | 564R20GAD33 | | | | |
| 3900 | | 0.560 (14.2) | | | | | 0.170 (4.3) | 564R20GAD39 | | | |
| 4700 | | | 564R20GAD47 | | | | | | | | |
| 6800 | | | 564R20GAD68 | | | | | | | | |
| 0.010 μF | | 0.680 (17.3) | | | | | 0.375 (9.5) | 564R20GAS10 | | | |
| Y5V | | | | | | | | | | | |
| 0.01 μF | | ± 20 | 0.620 (15.7) | | | | 0.170 (4.3) | 0.375 (9.5) | 20 | 0.032 (0.81) | 564R20GASS10 |
| 0.05 μF | 0.950 (24.1) | | 0.174 (4.4) | 20 | 564R20GAS50 | | | | | | |
| 0.10 μF | 0.950 (24.1) | | 0.240 (6.1) | 22 | 0.025 (0.64) | 565R20GAP10 | | | | | |

TAPE AND REEL OPTIONS

To specify tape and reel, add two letter suffix to the ordering code (for details of the packaging code see general section of the catalog).



| ORDERING INFORMATION, CERAMIC 3 kV _{DC} | | | | | | | | |
|--|-------------|----------------------------|-----------------------------|-------------------------------|--------------|--------------|------------------|--------------|
| C (pF) | TOL. (%) | D DIAMETER INCH (mm) | T THICKNESS INCH (mm) | LS LEAD SPACE INCH (mm) | WIRE SIZE | | ORDERING CODE | |
| | | | | | AWG | INCH (mm) | | |
| U2J (N750) | | | | | | | | |
| 10 | ± 20 | 0.330 (8.4) | 0.210 (5.3) | 0.250 (6.4) | 20 | 0.032 (0.81) | 564R30GAQ10 | |
| 12 | | | 0.210 (5.3) | | | | 564R30GAQ12 | |
| 15 | | | 0.180 (4.6) | | | | 564R30GAQ15 | |
| R3L (N2200) | | | | | | | | |
| 22 | ± 20 | 0.330 (8.4) | 0.200 (5.1) | 0.250 (6.4) | 20 | 0.032 (0.81) | 564R30GAQ22 | |
| 27 | | | 0.190 (4.8) | | | | 564R30GAQ27 | |
| 33 | | | 0.170 (4.3) | | | | 564R30GAQ33 | |
| X7R | | | | | | | | |
| 47 | ± 20 | 0.330 (8.4) | 0.230 (5.8) | 0.250 (6.4) | 20 | 0.032 (0.81) | 564R30GAQ47 | |
| 56 | | | 0.190 (4.8) | | | | 564R30GAQ56 | |
| 68 | | | 0.200 (5.1) | | | | 564R30GAQ68 | |
| 100 | | | 0.180 (4.6) | | | | 564R30GAT10 | |
| 150 | | | 0.190 (4.8) | | | | 564R30GAT15 | |
| 220 | | | 0.175 (4.4) | | | | 564R30GAT22 | |
| 270 | | | 0.180 (4.6) | | | | 564R30GAT27 | |
| 330 | | | 0.175 (4.4) | | | | 564R30GAT33 | |
| 390 | | | 0.180 (4.6) | | | | 564R30GAT39 | |
| 470 | | | 0.175 (4.4) | | | | 564R30GAT47 | |
| 680 | ± 10 | 0.400 (10.2) | 0.180 (4.6) | 0.375 (9.5) | 20 | 0.032 (0.81) | 564R30TST68 | |
| 1000 | | | 0.175 (4.4) | | | | 564R30TSD10 | |
| 1500 | | | 0.490 (12.5) | | | | 564R30TSD15 | |
| 1800 | | | 0.185 (4.7) | | | | 564R30TSD18 | |
| 2200 | | | 0.530 (13.5) | | | | 564R30TSD22 | |
| 2700 | | | 0.185 (4.7) | | | | 564R30TSD27 | |
| 3300 | | | 0.170 (4.3) | | | | 564R30TSD33 | |
| 3900 | | | 0.185 (4.7) | | | | 564R30TSD39 | |
| 4700 | | | 0.720 (18.3) | | | | 564R30TSD47 | |
| 6800 | | | 0.900 (22.9) | | | | 564R30TSD68 | |
| Y5S | | | | | | | | |
| 1000 | ± 20 | 0.400 (10.2) | 0.190 (4.8) | 0.250 (6.4) | 20 | 0.032 (0.81) | 564R30TSSD10 | |
| 1500 | | 0.460 (11.7) | | | | | 564R30TSSD15 | |
| 1800 | | 0.490 (12.4) | | | | | 564R30TSSD18 | |
| 2200 | | 0.530 (13.5) | | | | | 564R30TSSD22 | |
| 2700 | | 0.560 (14.2) | | | | | 564R30TSSD27 | |
| 3300 | | 0.620 (15.7) | 0.185 (4.7) | 0.375 (9.5) | 564R30TSSD33 | | | |
| 3900 | | 0.680 (17.3) | 564R30TSSD39 | | | | | |
| 4700 | | 0.790 (20.0) | 0.190 (4.8) | | 564R30TSSD47 | | | |
| 5600 | | 0.900 (22.9) | 0.205 (5.2) | | 564R30TSSD56 | | | |
| 6800 | | 0.205 (5.2) | 564R30TSSD68 | | | | | |
| Y5U | | | | | | | | |
| 680 | ± 20 | 0.330 (8.4) | 0.175 (4.4) | 0.250 (6.4) | 20 | 0.032 (0.81) | 564R30GAT68 | |
| Z5U | | | | | | | | |
| 1000 | ± 20 | 0.330 (8.4) | 0.195 (5.0) | 0.250 (6.4) | 20 | 0.032 (0.81) | 564R30GAD10 | |
| 1500 | | 0.360 (9.1) | 564R30GAD15 | | | | | |
| 1800 | | 0.400 (10.2) | 0.190 (4.8) | | | | 564R30GAD18 | |
| 2200 | | 0.430 (10.9) | 564R30GAD22 | | | | | |
| 2700 | | 0.460 (11.7) | 0.200 (5.1) | | | | 564R30GAD27 | |
| 3300 | | 0.490 (12.4) | 0.185 (4.7) | 0.375 (9.5) | 564R30GAD33 | | | |
| 3900 | | 0.530 (13.5) | 564R30GAD39 | | | | | |
| 4700 | | 0.620 (15.7) | 0.195 (5.0) | | 564R30GAD47 | | | |
| 6800 | | 0.680 (17.3) | 564R30GAD68 | | | | | |
| 8200 | | 0.720 (18.3) | 0.185 (4.7) | | 564R30GAD82 | | | |
| 0.010 μF | | 0.720 (18.3) | 0.265 (6.7) | 22 | 0.025 (0.64) | 565R30GASS20 | | |
| 0.020 μF | | 0.720 (18.3) | 0.240 (6.1) | 22 | 0.025 (0.64) | 565R30GASS33 | | |
| 0.033 μF | | 0.900 (22.9) | 0.240 (6.1) | 22 | 0.025 (0.64) | 565R30GASS33 | | |
| Y5V | | | | | | | | |
| 0.010 μF | | ± 20 | 0.720 (18.3) | 0.185 (4.7) | 0.375 (9.5) | 20 | 0.032 (0.81) | 564R30GASS10 |

TAPE AND REEL OPTIONS

To specify tape and reel, add two letter suffix to the ordering code (for details of the packaging code see general section of the catalog).



| ORDERING INFORMATION, CERAMIC 6 kV _{DC} | | | | | | | |
|--|-------------|----------------------------|-----------------------------|-------------------------------|-----------|--------------|------------------|
| C (pF) | TOL. (%) | D DIAMETER INCH (mm) | T THICKNESS INCH (mm) | LS LEAD SPACE INCH (mm) | WIRE SIZE | | ORDERING CODE |
| | | | | | AWG | INCH (mm) | |
| C0G (NP0) | | | | | | | |
| 10 | ± 20 | 0.400 (10.2) | 0.220 (5.6) | 0.375 (9.5) | 20 | 0.032 (0.81) | 564R60GAQ10 |
| U2J (N750) | | | | | | | |
| 22 | ± 20 | 0.460 (11.7) | 0.240 (6.1) | 0.375 (9.5) | 20 | 0.032 (0.81) | 564R60GAQ22 |
| R3L (N2200) | | | | | | | |
| 33 | ± 20 | 0.400 (10.2) | 0.230 (5.8) | 0.375 (9.5) | 20 | 0.032 (0.81) | 564R60GAQ33 |
| 47 | | 0.460 (11.7) | 0.205 (5.2) | | | | 564R60GAQ47 |
| X5F | | | | | | | |
| 100 | ± 20 | 0.400 (10.2) | 0.240 (6.1) | 0.375 (9.5) | 20 | 0.032 (0.81) | 564R60GAT10 |
| 220 | | | 0.265 (6.7) | | | | 564R60GAT22 |
| X5S | | | | | | | |
| 330 | ± 20 | 0.400 (10.2) | 0.260 (6.6) | 0.375 (9.5) | 20 | 0.032 (0.81) | 564R60GAT33 |
| Y5U | | | | | | | |
| 470 | ± 20 | 0.400 (10.2) | 0.265 (6.7) | 0.375 (9.5) | 20 | 0.032 (0.81) | 564R60GAT47 |
| 560 | | | 0.240 (6.1) | | | | 564R60GAT56 |
| Z5U | | | | | | | |
| 1000 | ± 20 | 0.400 (10.2) | 0.270 (6.9) | 0.375 (9.5) | 20 | 0.032 (0.81) | 564R60GAD10 |
| 1500 | | 0.460 (11.7) | 0.280 (7.1) | | | | 564R60GAD15 |
| 2200 | | 0.530 (13.5) | 0.240 (6.1) | | | | 564R60GAD22 |
| 3300 | | 0.620 (15.7) | 0.260 (6.6) | | | | 564R60GAD33 |
| 4700 | | | | | | | 0.790 (20.0) |
| 0.010 μF | | 0.950 (24.1) | 0.250 (6.4) | | | | 564R60GAS10 |

| ORDERING INFORMATION, CERAMIC 7.5 kV _{DC} | | | | | | | |
|--|-------------|----------------------------|-----------------------------|-------------------------------|-----------|--------------|------------------|
| C (pF) | TOL. (%) | D DIAMETER INCH (mm) | T THICKNESS INCH (mm) | LS LEAD SPACE INCH (mm) | WIRE SIZE | | ORDERING CODE |
| | | | | | AWG | INCH (mm) | |
| X5F | | | | | | | |
| 100 | ± 20 | 0.530 (13.5) | 0.310 (7.9) | 0.500 (12.7) | 20 | 0.032 (0.81) | 564R75GAT10 |
| 470 | | 0.620 (15.7) | 0.270 (6.9) | | | | 564R75GAT47 |
| Y5U | | | | | | | |
| 1000 | + 80/- 20 | 0.620 (15.7) | 0.320 (8.1) | 0.500 (12.7) | 20 | 0.032 (0.81) | 564R75GAD10 |
| Z5U | | | | | | | |
| 2500 | + 80/- 20 | 0.620 (15.7) | 0.280 (7.1) | 0.500 (12.7) | 20 | 0.032 (0.81) | 564R75GAD25 |



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Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

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Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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