

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



| 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

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)



| 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 | | 0.490 (12.4) | | | | | 564R20GAD39 | | | | |
| 4700 | | 0.560 (14.2) | 0.170 (4.3) | | | | 564R20GAD47 | | | | |
| 6800 | | | | | | | 564R20GAD68 | | | | |
| 0.010 μF | | | | | | | 564R20GAS10 | | | | |
| | | 0.680 (17.3) | | | | | 0.375 (9.5) | | | | |
| 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 | | | 0.175 (4.4) | | | | 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) | 0.185 (4.7) | 0.375 (9.5) | 564R30TSSD27 | | |
| 3300 | | 0.620 (15.7) | | | 564R30TSSD33 | | |
| 3900 | | 0.680 (17.3) | 0.190 (4.8) | 564R30TSSD39 | | | |
| 4700 | | 0.790 (20.0) | 0.190 (4.8) | 564R30TSSD47 | | | |
| 5600 | | 0.900 (22.9) | 0.205 (5.2) | 564R30TSSD56 | | | |
| 6800 | | | | 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) | 0.200 (5.1) | | | | 564R30GAD22 |
| 2700 | | 0.460 (11.7) | 0.185 (4.7) | 0.375 (9.5) | 564R30GAD27 | | |
| 3300 | | 0.490 (12.4) | | | 564R30GAD33 | | |
| 3900 | | 0.530 (13.5) | 0.195 (5.0) | 564R30GAD39 | | | |
| 4700 | | 0.620 (15.7) | 0.185 (4.7) | 564R30GAD47 | | | |
| 6800 | | 0.680 (17.3) | 0.185 (4.7) | 564R30GAD68 | | | |
| 8200 | | 0.720 (18.3) | 0.265 (6.7) | 564R30GAD82 | | | |
| 0.010 μF | | 0.720 (18.3) | 0.240 (6.1) | 564R30GAS10 | | | |
| 0.020 μF | | | | 22 | 0.025 (0.64) | 565R30GASS20 | |
| 0.033 μF | | | | 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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Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

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.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.

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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