

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 | | 0.680 (17.3) | 0.170 (4.3) | | | | 564R20TSD22 | | | | |
| 2700 | | 0.680 (17.3) | 0.170 (4.3) | | | | 564R20TSD27 | | | | |
| 3300 | | | | | | | 564R20TSD33 | | | | |
| 3900 | | | | | | | 564R20TSD39 | | | | |
| 4700 | | | | | | | 564R20TSD47 | | | | |
| 5600 | | | | | | | 564R20TSD56 | | | | |
| 6800 | 0.375 (9.5) | 0.170 (4.3) | 564R20TSD68 | | | | | | | | |
| 4700 | | | 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) | | | | | 564R20GAD39 | | | | |
| 4700 | | 0.680 (17.3) | 0.170 (4.3) | | | | 564R20GAD47 | | | | |
| 6800 | | | | | | | 564R20GAD68 | | | | |
| 0.010 µF | | | | | | | 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 | | | 0.175 (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) | 0.265 (6.7) | 22 | 0.025 (0.64) | 564R30GAD68 | |
| 8200 | | 0.720 (18.3) | | | | 564R30GAD82 | |
| 0.010 μF | | 0.720 (18.3) | 0.240 (6.1) | 22 | 0.025 (0.64) | 564R30GAS10 | |
| 0.020 μF | | | | | | | |
| 0.033 μF | | | | | | | |
| 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) | | | | | 564R60GAD47 |
| 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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- 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.);

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- 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

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