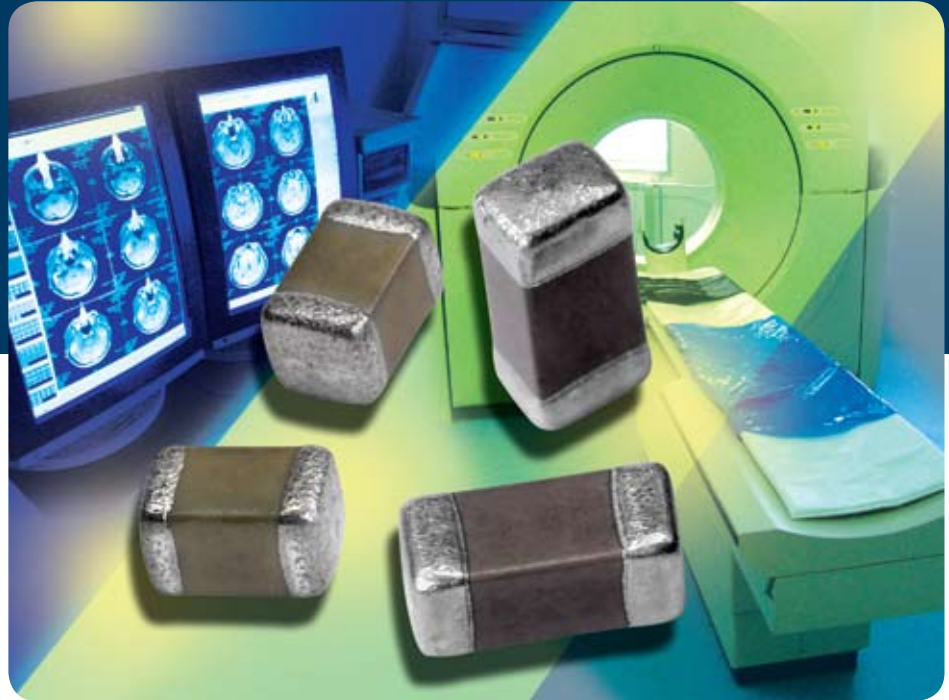




OPEN-MODE DESIGN CAPACITORS

VJ OMD Series



OMD Capacitors Available with Polymer Terminations

KEY BENEFITS

- Reduces the risk of shorts or low insulation resistance (IR) due to board-flex cracks
- Available with polymer terminations, which increase board flex by as much as 50 %
- Features higher voltage breakdowns than standard designs with voltage ranges from 16 VDC to 3000 VDC
- Provides high-frequency filtering for switching power supplies
- Available with 100 % voltage condition

APPLICATIONS

- Buck and boost dc-to-dc converters
- Voltage multipliers for flyback converters
- Lighting ballast circuits
- High-frequency filtering in power supplies for medical, computer, motor control, and telecommunications systems

Datasheets are available on our web site at www.vishay.com for VJ OMD Series: <http://www.vishay.com/doc?45046>, <http://www.vishay.com/doc?45047>



Surface Mount Multilayer Ceramic Chip Capacitor Solutions for Boardflex Sensitive Applications

FEATURES

- Surface mountable, precious metal technology, wet build process.
OMD-Cap (Open Mode Design) reduces the risk of shorts or low IR because of board flex cracks
Efficient low-power consumption, ripple current capable to 1.2 A_rms at 100 kHz
High Voltage breakdown compared to standard design
Available with 100 % voltage condition, process code "5H" (its available for 630 V and lower.
Contact micc.specials@vishay.com for higher voltages)
Excellent reliability and thermal shock performance
Available with polymer termination for increase resistance to board flex cracking
Protective surface coating of high voltage capacitors maybe required to prevent surface arcing



ELECTRICAL SPECIFICATIONS

Note: Electrical characteristics at + 25 °C unless otherwise stated
Protective surface coating of high voltage capacitors maybe required to prevent surface arcing. Input side filter.

Operating Temperature: -55 °C to + 125 °C

Capacitance Range: 100 pF to 1.8 µF

Voltage Rating: 16 Vdc to 3000 Vdc

Temperature Coefficient of Capacitance (TCC):

X7R: ± 15 % from - 55 °C to + 125 °C, with 0 Vdc applied

Disipation Factor:

6.3 V, 10 V ratings: 5 % max. at 1.0 V_rms and 1 kHz

16 V, 25 V ratings: 3.5 % max. at 1.0 V_rms and 1 kHz

≥ 50 V ratings: 2.5 % max. at 1.0 V_rms and 1 kHz

Aging Rate: 1 % maximum per decade

APPLICATIONS

- Ideal for Power Supplies
Input filter capacitor



ELECTRICAL SPECIFICATIONS

Note: Electrical characteristics at + 25 °C unless otherwise stated.
Protective surface coating of high voltage capacitors maybe required to prevent surface arcing.

Operating Temperature: - 55 °C to + 125 °C

Capacitance Range: 10 pF to 47 nF

Voltage Rating: 50 Vdc to 3000 Vdc

Temperature Coefficient of Capacitance (TCC):

COG: 0 ± 30 ppm/°C from - 55 °C to + 125 °C

Aging Rate: 0 % maximum per decade

Disipation Factor:

0.1 % max. at 1.0 V_rms and 1 MHz for values ≤ 1000 pF

0.1 % max. at 1.0 V_rms and 1 kHz for values > 1000 pF

Insulation Resistance (IR):

At + 25 °C and rated voltage 100 000 MΩ minimum or 1000 ΩF, whichever is less

At + 125 °C and rated voltage 10 000 MΩ minimum or 100 ΩF, whichever is less

APPLICATIONS

- Input filter capacitors
Output filter capacitors
Snubber capacitors reduce MOSFET voltage spikes
Lighting Ballasts



FEATURES

- Surface mountable. Precious metal technology, wet build process
OMD-Cap (Open Mode Design) reduces the risk of shorts or low IR because of board flex cracks
High frequency filtering for switching power supplies
Available with 100 % voltage condition, process code "5H" is available for 630 V and lower. Contact micc.specials@vishay.com for higher voltages
Available with polymer termination for increase resistance to board flex cracking
Protective surface coating high voltage capacitors maybe required to prevent surface arcing.

ELECTRICAL SPECIFICATIONS

Note: Electrical characteristics at + 25 °C unless otherwise stated.
Protective surface coating of high voltage capacitors maybe required to prevent surface arcing.

Operating Temperature: - 55 °C to + 125 °C

Capacitance Range: 10 pF to 47 nF

Voltage Rating: 50 Vdc to 3000 Vdc

Temperature Coefficient of Capacitance (TCC):

COG: 0 ± 30 ppm/°C from - 55 °C to + 125 °C

Aging Rate: 0 % maximum per decade

Disipation Factor:

0.1 % max. at 1.0 V_rms and 1 MHz for values ≤ 1000 pF

0.1 % max. at 1.0 V_rms and 1 kHz for values > 1000 pF

Insulation Resistance (IR):

At + 25 °C and rated voltage 100 000 MΩ minimum or 1000 ΩF, whichever is less

At + 125 °C and rated voltage 10 000 MΩ minimum or 100 ΩF, whichever is less

Table with columns: PART ORDERING NUMBER, LENGTH (L), WIDTH (W), MAXIMUM THICKNESS (T), MINIMUM, MAXIMUM, TERMINATION PAD (P) MINIMUM, MAXIMUM. Rows include VJ1206, VJ1210, VJ1808, VJ1812, VJ1825, VJ2220, VJ2225.

ORDERING INFORMATION table with columns: CASE SIZE, DIELECTRIC, CAPACITANCE, CAPACITANCE TOLERANCE, X TERMINATION, DC VOLTAGE RATING, MARKING, PACKAGING, PROCESS CODE. Includes sub-tables for X, A, B, T, and # (2).

Notes:

- (1) DC voltage rating should not be exceeded in application
(2) Process code with 2 digits has to be added
(3) Polymer plus termination "B" termination part number code length dimensions positive tolerances (including bandwidth) above are allowed to increase by the following amounts.
1206 and smaller case sizes: Length 0.002" (0.05 mm)
1210 and larger case sizes: Length 0.004" (0.1 mm)

FEATURES

- Surface mountable, precious metal technology, wet build process.
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ELECTRICAL SPECIFICATIONS

Note: Electrical characteristics at + 25 °C unless otherwise stated
Protective surface coating of high voltage capacitors maybe required to prevent surface arcing. Input side filter.

Operating Temperature: -55 °C to + 125 °C

Capacitance Range: 100 pF to 1.8 µF

Voltage Rating: 16 Vdc to 3000 Vdc

Temperature Coefficient of Capacitance (TCC):

X7R: ± 15 % from - 55 °C to + 125 °C, with 0 Vdc applied

Disipation Factor:

6.3 V, 10 V ratings: 5 % max. at 1.0 V_rms and 1 kHz

16 V, 25 V ratings: 3.5 % max. at 1.0 V_rms and 1 kHz

≥ 50 V ratings: 2.5 % max. at 1.0 V_rms and 1 kHz

Aging Rate: 1 % maximum per decade

APPLICATIONS

- Ideal for Power Supplies
Input filter capacitor

Table with columns: PART ORDERING NUMBER, LENGTH (L), WIDTH (W), MAXIMUM THICKNESS (T), MINIMUM, MAXIMUM, TERMINATION PAD (P) MINIMUM, MAXIMUM. Rows include VJ0805, VJ1206, VJ1210, VJ1808, VJ1812, VJ1825, VJ2220, VJ2225.

ORDERING INFORMATION table with columns: CASE SIZE, DIELECTRIC, CAPACITANCE, CAPACITANCE TOLERANCE, X TERMINATION, DC VOLTAGE RATING, MARKING, PACKAGING, PROCESS CODE. Includes sub-tables for X, A, B, T, and # (2).

Notes:

- (1) DC voltage rating should not be exceeded in application
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