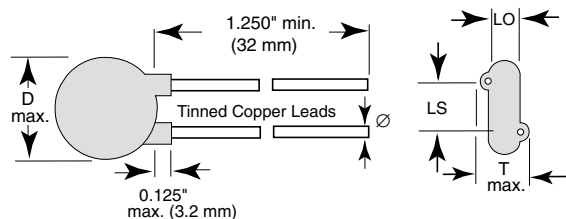


AC Line Rated Disc Capacitors Class X1, 400 VAC/Class Y2, 300 VAC



LO' = 0.132" (3.4 mm) typ.

INSULATION RESISTANCE

Min. 1000 Ω F

TOLERANCE ON CAPACITANCE

$\pm 10\%$; $\pm 20\%$

DISSIPATION FACTOR

2.0 % max. at 1 kHz; 1 V

CERAMIC DIELECTRIC

C0G, U2J, P3K, R3L (Class 1)
X7R, Y5U (Class 2)

CATEGORY TEMPERATURE RANGE

- 25 °C to + 125 °C

CLIMATIC CATEGORY ACC. TO EN60068-1

25/125/21

OPERATING TEMPERATURE RANGE

- 30 °C to + 125 °C

FEATURES

- Worldwide safety agency recognition
Underwriters laboratories - UL1414 and UL1283
Canadian standards association - CSA 22.2
European EN132400 to IEC 60384-14 second edition
- Complete range of capacitance values
- Radial leads
- Compliant to RoHS directive 2002/95/EC



APPLICATIONS

- Required in AC Power Supply and Filter Applications
- Specific Industry Requirements

DESIGN

The capacitors consist of a ceramic disc of which both sides are silver-plated. Connection leads are made of tinned copper having a diameter of 0.032" (0.81 mm) or 0.025" (0.64 mm). The capacitors may be supplied with radial kinked or straight leads having a lead spacing of 0.375" (9.5 mm) or 0.250" (6.4 mm). The standard tolerance is $\pm 20\%$. Coating is made of flame retardant epoxy resin in accordance with "UL 94 V-0."

CAPACITANCE RANGE

10 pF to 0.015 μ F

RATED VOLTAGE

IEC 60384-14.2:	(Y2): 300 VAC, 50 Hz
IEC 60384-14.2:	(X1): 400 VAC, 50 Hz
UL 1414:	250 VAC, 60 Hz
UL 1283:	250 VAC, 60 Hz
CSA 22.2 No.1:	250 VAC, 60 Hz
CSA 22.2 No.8:	400 VAC, 60 Hz

DIELECTRIC STRENGTH BETWEEN LEADS

Component test:

2500 VAC, 50 Hz, 2 s

As repeated test admissible only once with:

2250 VAC, 50 Hz, 2 s

Random sampling test (destructive test):

2500 VAC, 50 Hz, 60 s

DIELECTRIC STRENGTH OF BODY INSULATION

2300 VAC, 50 Hz, 60 s (destructive test)

ORDERING INFORMATION, CERAMIC X1/Y2 CAPACITORS 30LV

C (pF)	TOL. (%)	D DIAMETER INCH (mm)	T THICKNESS INCH (mm)	WIRE SIZE		LS LEAD SPACE INCH (mm)	ORDERING CODE
C0G							
10	± 10 %	0.330 (8.4)	0.185 (4.7)	22	0.025 (0.64)	0.250 (6.4)	30LVQ10-R
U2J							
15	± 10 %	0.330 (8.4)	0.200 (5.1)	22	0.025 (0.64)	0.250 (6.4)	30LVQ15-R
P3K							
22	± 10 %	0.330 (8.4)	0.180 (4.6)	22	0.025 (0.64)	0.250 (6.4)	30LVQ22-R
R3L							
33	± 10 %	0.330 (8.4)	0.190 (4.8)	22	0.025 (0.64)	0.250 (6.4)	30LVQ33-R
47	± 10 %	0.330 (8.4)	0.170 (4.3)	22	0.025 (0.64)	0.250 (6.4)	30LVQ47-R
S3L							
68	± 10 %	0.330 (8.4)	0.175 (4.4)	22	0.025 (0.64)	0.250 (6.4)	30LVQ68-R
X7R							
100	± 10 %	0.330 (8.4)	0.180 (4.6)	22	0.025 (0.64)	0.250 (6.4)	30LVT10-R
150		0.330 (8.4)	0.180 (4.6)				30LVT15-R
220		0.330 (8.4)	0.195 (5.0)				30LVT22-R
330		0.330 (8.4)	0.195 (5.0)				30LVT33-R
470		0.330 (8.4)	0.180 (4.6)				30LVT47-R
560		0.330 (8.4)	0.200 (5.1)				30LVT56-R
680		0.330 (8.4)	0.180 (4.6)				30LVT68-R
1000		0.365 (9.3)	0.185 (4.7)				30LVT10-R
1500		0.460 (11.7)	0.180 (4.6)				30LVT15-R
Y5U							
680	± 20 %	0.330 (8.4)	0.220 (5.6)	22	0.025 (0.64)	0.250 (6.4)	30LVT68-R
1000		0.330 (8.4)	0.215 (5.5)				30LVD10-R
1500		0.330 (8.4)	0.195 (5.0)				30LVD15-R
2000		0.400 (10.2)	0.210 (5.3)				30LVD20-R
2200		0.400 (10.2)	0.200 (5.1)				30LVD22-R
2700		0.430 (10.9)	0.200 (5.1)				30LVD27-R
2800		0.430 (10.9)	0.200 (5.1)				30LVD28-R
3000		0.460 (11.7)	0.205 (5.2)				30LVD30-R
3200		0.460 (11.7)	0.200 (5.1)				30LVD32-R
3300		0.460 (11.7)	0.195 (5.0)				30LVD33-R
3900		0.490 (12.4)	0.200 (5.1)				30LVD39-R
4000		0.530 (13.5)	0.210 (5.3)				30LVD40-R
4700		0.620 (15.7)	0.220 (5.6)	20	0.032 (0.81)	0.375 (9.5)	30LVD47-R
5000		0.620 (15.7)	0.215 (5.5)				30LVD50-R
5500		0.560 (14.2)	0.195 (5.0)				30LVD55-R
5600		0.560 (14.2)	0.195 (5.0)				30LVD56-R
6800		0.680 (17.3)	0.205 (5.2)				30LVD68-R
8000		0.680 (17.3)	0.195 (5.0)				30LVD80-R
9000		0.720 (18.3)	0.200 (5.1)				30LVD90-R
0.010 µF		0.790 (20.1)	0.190 (4.8)				30LVS10-R
0.015 µF		0.900 (22.9)	0.200 (5.1)				30LVS15-R

Notes

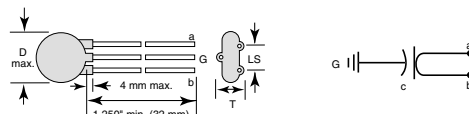
1. Alternate lead spacings of 7.5 mm and 10 mm are available bulk or tape and reel on request.
2. European required minimum lead clearance (prevents use of inside crimp) 0.118" (3 mm)
3. Type 30 LVS15 not available with UL 1414 recognition.

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)

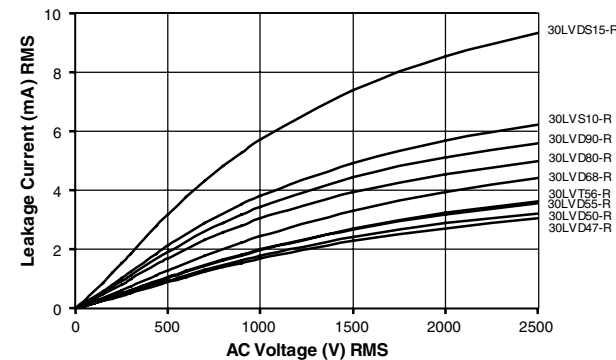
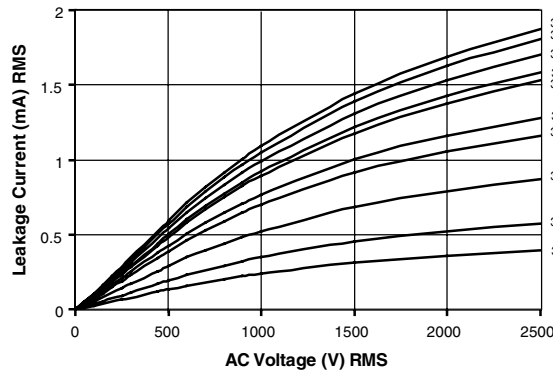
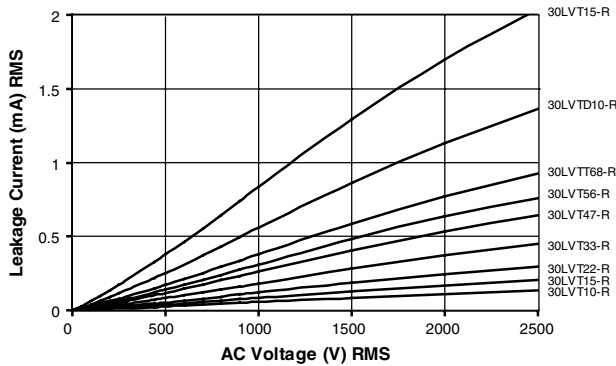
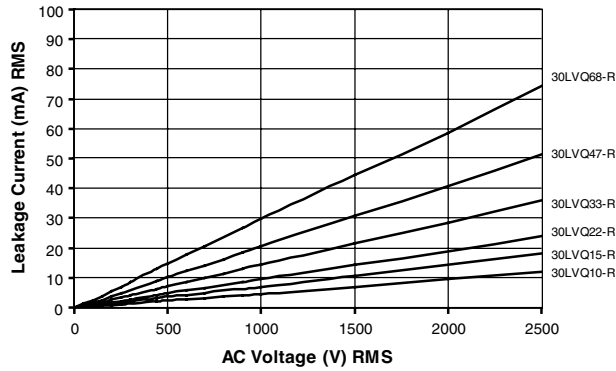
Optional 3-leaded Style

An optional 3-leaded construction is available. It consists of a single capacitor with the two outside leads attached to one electrode, and the center lead attached to the electrode. Used in feed-thru or line-to-ground applications, it allows a short ground lead for enhanced high frequency performance.

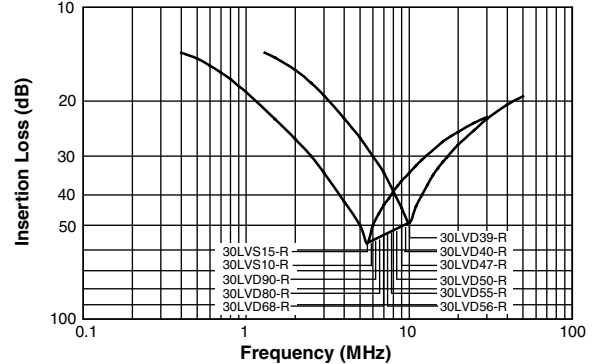
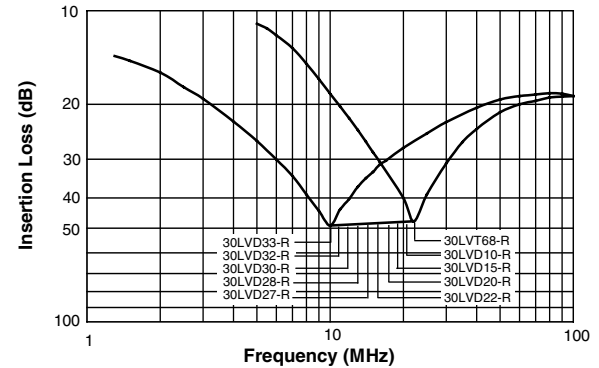
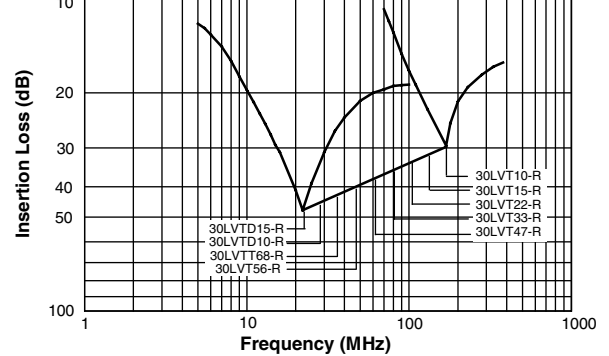
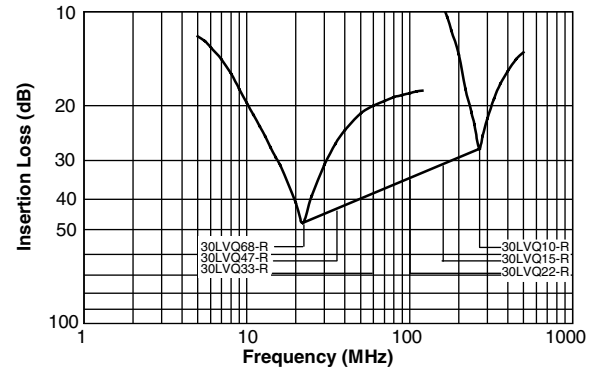




LEAKAGE CURRENT VS. VOLTAGE (TYPICAL)



INSERTION LOSS VS. FREQUENCY (TYPICAL)



APPROVALS

IEC 60384 - 14/2nd Issue (1993) incl. Am.1 (1995) - Safety Tests
EN132400 (1994) - Safety Tests

That approval together with CB Test Certificate substitutes the national approval of the following nations:

Belgium	France	Italy	Austria	China	Japan	Spain
Denmark	Greece	Luxembourg	Portugal	Singapore	Poland	United Kingdom
Germany	Ireland	Netherlands	Sweden	Slovenia	Hungaria	Czech Republic
Finland	Iceland	Norway	Switzerland	Korea	Israel	

Y2 Capacitor: CB-Test Certificate:	DE 1-19455	10 pF... 0.015 µF	300 V _{AC}
X1 Capacitor: CB-Test Certificate:	DE 1-19455	10 pF... 0.015 µF	400 V _{AC}



UNDERWRITERS LABORATORIES INC.

UL 1414	Across-the-line, Antenna-coupling and Line-by-pass component	10 pF... 0.010 µF
	Agency File/License E99264 V2S2	250 V _{AC}
UL 1283	EMI Filters	10 pF... 0.015 µF
	Agency File/License E99264 V2S2	250 V _{AC}



CANADIAN STANDARDS ASSOCIATION

CSA C22.2	Across-the-line, Isolation capacitor	10 pF... 0.015 µF
No. 1	Agency File/License LR 62016-12	250 V _{AC}
No. 8	Line-to-ground capacitor	10 pF... 0.015 µF
	Agency File/License LR 62016-12	400 V _{AC}



Note 1

UL1414 Across-The-Line, Antenna Coupling, and Line-By-Pass Capacitors:

- Across-The-Line - A capacitor connected either across a supply circuit or between one side of a supply circuit and a conductive part that may be connected to earth ground.
- Antenna-Coupling - A capacitor connected from an antenna terminal to circuits within an appliance.
- Line-By-Pass - A capacitor connected between one side of a supply circuit and an accessible conductive part

Note 2

IEC 60384-14 Subclass Y Capacitors:

- A capacitor of a type suitable for use in situations where failure of the capacitor could lead to danger of electric shock.
- Class Y capacitors are divided into sub-classes based on type of insulation bridged and voltage ranges.
- For definitions of basic, supplementary, double and reinforced insulation, see IEC Publication 536.
- Subclass Y capacitors may be used in applications which require a Subclass X rating.

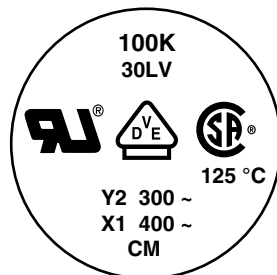
Note 3

IEC 60384-14 Subclass X Capacitors:

- A capacitor of a type suitable for use in situations where failure of the capacitor would not lead to danger of electric shock.
- Class X capacitors are divided into subclasses according to the peak impulse test voltage superimposed on the main voltage

MARKING

Sample





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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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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.);

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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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