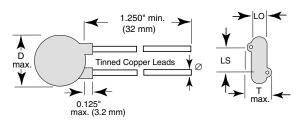
# **30LV Series**

Vishay Cera-Mite



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



LO' = 0.132" (3.4 mm) typ.

### **INSULATION RESISTANCE**

Min. 1000  $\Omega F$ 

### **TOLERANCE ON CAPACITANCE**

± 10 %; ± 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



COMPLIANT

### 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 µF

### 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)

### Vishay Cera-Mite

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

ORDERING INFORMATION, CERAMIC X1/Y2 CAPACITORS 30LV										
С	TOL.	D DIAMETER	T THICKNESS	WIRE SIZE		LS LEAD SPACE	ORDERING			
(pF)	(%)	INCH (mm)	INCH (mm)	AWG	INCH (mm)	INCH (mm)	CODE			
COG					1		1			
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	10.0/	0.000 (0.4)	0.400.(4.0)	00	0.005 (0.04)	0.050 (0.4)				
22	± 10 %	0.330 (8.4)	0.180 (4.6)	22	0.025 (0.64)	0.250 (6.4)	30LVQ22-R			
<b>R3L</b> 33	± 10 %	0.330 (8.4)	0.100 (4.9)	22	0.025 (0.64)	0.250 (6.4)	30LVQ33-R			
47	± 10 % ± 10 %	0.330 (8.4)	0.190 (4.8) 0.170 (4.3)	22	0.025 (0.64)	0.250 (6.4)	30LVQ33-R 30LVQ47-R			
S3L	± 10 %	0.330 (0.4)	0.170 (4.3)	22	0.025 (0.04)	0.250 (0.4)	30LVQ47-N			
68	± 10 %	0.330 (8.4)	0.175 (4.4)	22	0.025 (0.64)	0.250 (6.4)	30LVQ68-R			
X7R	10 /0	0.000 (0.4)	0.170 (4.4)		0.020 (0.04)	0.200 (0.4)	002/00011			
100		0.330 (8.4)	0.180 (4.6)	1		1	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	± 10 %	0.330 (8.4)	0.180 (4.6)	22	0.025 (0.64)	0.250 (6.4)	30LVT47-R			
560		0.330 (8.4)	0.200 (5.1)	1	. ,	. ,	30LVT56-R			
680		0.330 (8.4)	0.180 (4.6)	-			30LVTT68-R			
1000		0.365 (9.3)	0.185 (4.7)				30LVTD10-R			
1500		0.460 (11.7)	0.180 (4.6)				30LVTD15-R			
Y5U										
680		0.330 (8.4)	0.220 (5.6)				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)	22	0.025 (0.64)	0.250 (6.4)	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	1 00 %	0.460 (11.7)	0.195 (5.0)	-			30LVD33-R			
3900	± 20 %	0.490 (12.4)	0.200 (5.1)	-			30LVD39-R			
4000 4700	4	0.530 (13.5) 0.620 (15.7)	0.210 (5.3)	+			30LVD40-R 30LVD47-R			
5000	4	0.620 (15.7)	0.220 (5.6) 0.215 (5.5)	4			30LVD47-R 30LVD50-R			
5500	4	0.560 (15.7)	0.215 (5.5)	-			30LVD50-R 30LVD55-R			
5600	4	0.560 (14.2)	0.195 (5.0)	4			30LVD55-R 30LVD56-R			
6800	-	0.680 (17.3)	0.205 (5.2)	20	0.032 (0.81)	0.375 (9.5)	30LVD68-R			
8000	-	0.680 (17.3)	0.195 (5.0)		0.002 (0.01)	0.070 (0.0)	30LVD80-R			
9000	1	0.720 (18.3)	0.200 (5.1)	-			30LVD90-R			
0.010 μF	1	0.790 (20.1)	0.190 (4.8)	-			30LVS10-R			
0.015 μF	-	0.900 (22.9)	0.200 (5.1)	1			30LVS15-R			

#### Notes

1. Alternate lead spacings of 7.5 mm and 10 mm are available bulk or tape and reel on request.

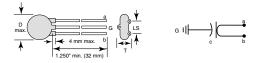
European required minimum lead clearance (prevents use of inside crimp) 0.118" (3 mm)
Type 30 LVS15 not available with UL 1414 recognition.

### 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.





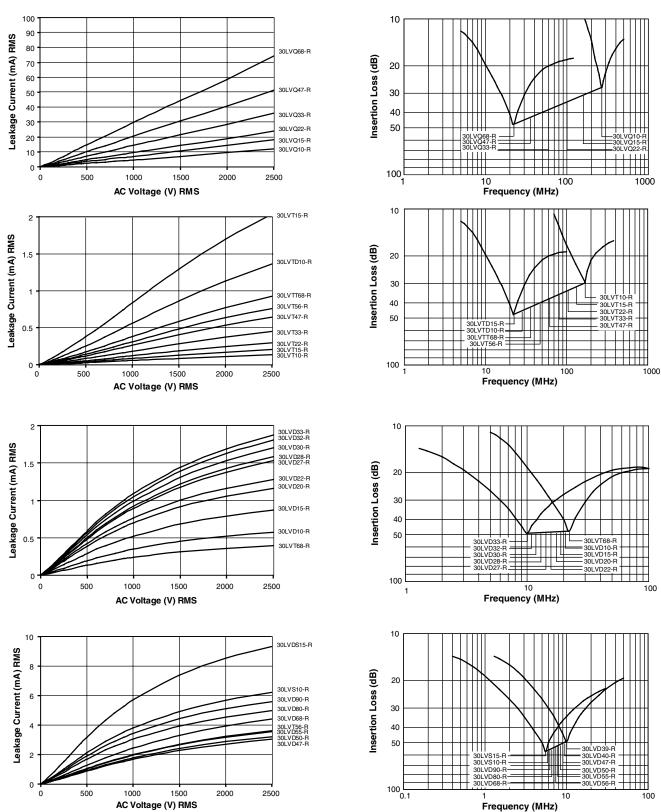
AC Line Rated Disc Capacitors Class X1, 400 VAC/Class Y2, 300 VAC

Vishay Cera-Mite

**INSERTION LOSS VS. FREQUENCY** 

(TYPICAL)

LEAKAGE CURRENT VS. VOLTAGE (TYPICAL)



# **30LV Series**

### Vishay Cera-Mite

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



### APPROVALS

EN132400 (199 That approval Belgium Denmark Germany Finland Y2 Capacitor: C	I/2 <sup>nd</sup> Issue (1993) in 94) - Safety Tests together with CB <sup>-</sup> France		-			
Belgium Denmark Germany Finland Y2 Capacitor: C	-	Test Certificate su				
Denmark Germany Finland Y2 Capacitor: C	France		ubstitutes the nat	ional approval of	the following n	ations:
Germany Finland Y2 Capacitor: C		Italy	Austria	China	Japan	Spain
Finland Y2 Capacitor: C	Greece	Luxembourg	Portugal	Singapore	Poland	United Kingdom
Y2 Capacitor: C	Ireland	Netherlands	Sweden	Slovenia	Hungaria	Czech Republic
•	Iceland	Norway	Switzerland	Korea	Israel	
X1 Capacitor: C	B-Test Certificate:	te: DE 1-19455 10 pF 0.015 μF			300 V <sub>AC</sub>	
	X1 Capacitor: CB-Test Certificate:		10 pF 0	.015 μF	400 V <sub>AC</sub>	VDE
UNDERWRITER	S LABORATORIES I	NC.				
	oss-the-line, Antenna-o ncy File/License	nna-coupling and Line-by-pass component E99264 V2S2			010 μF	<b>G I</b> <sup>®</sup>
	Filters ncy File/License	E99264 V2S2		10 pF 0.0 250 V <sub>AC</sub>	015 μF	77
CANADIAN STA	NDARDS ASSOCIAT	ION				
	oss-the-line, Isolation on concentric sectors of the sectors of th	apacitor LR 62016-12		10 pF 0.0 250 V <sub>AC</sub>	)15 μF	<u>A</u>
	e-to-ground capacitor ncy File/License	LR 62016-12			10 pF 0.015 μF 400 V <sub>AC</sub>	

#### 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

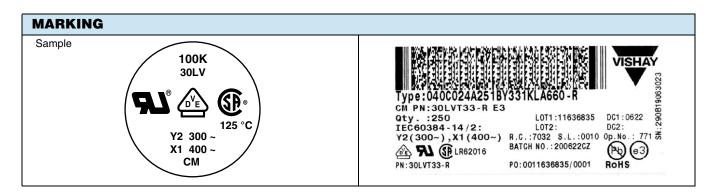
IEC 60384-14 Subclass Y Capacitors:

- 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 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





Vishay

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