

# 440L, 30LV, 30LVS, 25Y, 125L, 20VL Series



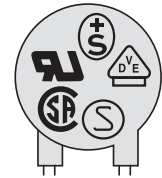
Vishay Cera-Mite

## AC Line Rated Disc Capacitors

### X & Y EMI/RFI FILTER TYPES: ACROSS-THE-LINE, LINE-BY-PASS, ANTENNA COUPLING

Vishay Cera-Mite AC Line Rated Discs are rugged, high voltage capacitors specifically designed and tested for use on 125 Volt through 600 Volt AC power sources. Certified to meet demanding X & Y type worldwide safety agency requirements, they are applied in across-the-line, line-to-ground, and line-by-pass filtering applications. Vishay Cera-Mite offers the most complete selection in the industry—six product families—exactly tailored to your needs.

- Worldwide Safety Agency Recognition
  - Underwriters Laboratories - UL1414 & UL1283
  - Canadian Standards Association - CSA 22.2 No. 1 & No. 8
  - European EN132400 to IEC 384-14 Second Edition
- Required In AC Power Supply and Filter Applications
- Six Families Tailored To Specific Industry Requirements
- Complete Range of Capacitance Values



### AC LINE RATED CERAMIC CAPACITOR SPECIFICATIONS

PERFORMANCE DATA / SERIES:	440L	30LV	30LVS	25Y	125L	20VL
Application Voltage Range (Vrms 50/60 Hz) (Note 1)	250/500	300/400	250/400	250/400	250	250
Dielectric Strength (Vrms 50/60 Hz for 1 minute)	4000	2500	2500	2500	2000	1250
Dissipation Factor (Maximum)	2%					
Insulation Resistance (Minimum)	1000 ΩF					
Mechanical Data	Service Temperature 125°C Maximum; Coating Material per UL94V0					
Temperature Characteristics	Y5U	Y5U	Y5U	Y5S	Y5V	Y5V
	See Part Number Detail for Temperature Characteristics					

### SAFETY AGENCY RECOGNITION AND EMI/RFI FILTERING SUBCLASS

Series / Recognition / Voltage	440L	30LV	30LVS	25Y	125L	20VL
<b>Underwriters Laboratories Inc.:</b> (Note 2)						
UL 1414 Across-The-Line	Across-The-Line	Across-The-Line	—	—	—	—
UL 1414 Antenna Coupling	Antenna-Coupling	Antenna-Coupling	—	—	—	—
UL 1414 Line-By-Pass	Line-By-Pass	Line-By-Pass	Line-By-Pass	Line-By-Pass	Line-By-Pass	—
UL 1414 Rated Voltage	250 VAC	250 VAC	250 VAC	250 VAC	250 VAC	—
<b>Electromagnetic Interference Filters</b>	EMI Filters	EMI Filters	EMI Filters	EMI Filters	—	EMI Filters
UL1283 Rated Voltage	600 VAC	250 VAC	250 VAC	250 VAC	—	250 VAC
<b>Canadian Standards Association:</b>						
CSA 22.2 No.1 Across-The-Line	Across-The-Line	Across-The-Line	—	—	—	—
CSA 22.2 No.1 Isolation	Isolation	Isolation	Isolation	Isolation	Isolation	—
CSA 22.2 No. 1 Rated Voltage	250 VAC	250 VAC	250 VAC	250 VAC	125/250 VAC	—
CSA 22.2 No. 8 Line-to-Ground Capacitors	—	Line-To-Ground	Line-To-Ground	Line-To-Ground	—	Line-To-Ground
For Use in Certified EMI Filters	—	Certified EMI Filters	Certified EMI Filters	Certified EMI Filters	—	Certified EMI Filters
CSA 22.2 No. 8 Rated Voltage	—	400 VAC	400 VAC	400 VAC	—	250 VAC
<b>European CENELEC Electronic Components Committee (CECC) EN 132 400 to Publication IEC 384-14 Table II, Edition 2:</b>						
IEC 384-14 Second Edition Subclass Y: (Note 3)	<b>Y1</b>	<b>Y2</b>	<b>Y2</b>	<b>Y2</b>	<b>Y4</b>	—
Subclass Y Voltage (Vrms 50-60 Hz)	500 VAC	300 VAC	250 VAC	250 VAC	125 VAC	—
Type of Insulation Bridged	Double or Reinforced	Basic or Supplementary	Basic or Supplementary	Basic or Supplementary	Basic or Supplementary	—
Peak Impulse Voltage Before Endurance Test	8 kV	5 kV	5 kV	5 kV	2.5 kV	—
<b>IEC 384-14 Second Edition Subclass X: (Note 4)</b>	<b>X1</b>	<b>X1</b>	<b>X1</b>	<b>X1</b>	<b>X1</b>	<b>X2</b>
Subclass X Voltage (Vrms 50-60 Hz)	400 VAC	400 VAC	400 VAC	400 VAC	400 VAC	400 VAC
Peak Impulse Voltage in Service	2.5 to 4.0 kV	2.5 to 4.0 kV	2.5 to 4.0 kV	2.5 to 4.0 kV	2.5 to 4.0 kV	To 2.5 kV
Application	High Pulse	High Pulse	High Pulse	High Pulse	High Pulse	Gen. Purpose
Damp Heat, Steady State Recognition	Code HKF - 25°C/ + 125°C/21 days					

#### Note 1

Voltage Ratings: All ratings are manufacturer's rating.

- Part markings are governed by agency rules and customer requirements.
- Parts are marked 250 VAC unless otherwise requested.

#### Note 2

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 3

IEC 384-14 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 4

IEC 384-14 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

#### Note 5

AC Leakage Current:

- For all Series (except 125L) - AC Leakage Current (mA) specified at 250 Vrms, 60 Hz.
- For 125L Series - AC Leakage Current (mA) specified at 125 Vrms, 60Hz.

#### Note 6

Alternate Lead Spacings of 7.5mm and 10mm are available bulk or tape & reel.

- European Required Minimum Lead Clearance (Prevents Use of Inside Crimp) .315" (8mm) on 440L Series; 0.118" (3mm) on all other series.



# 440L, 30LV, 30LVS, 25Y, 125L, 20VL Series

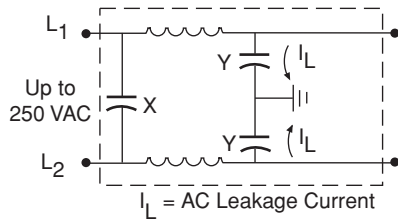
AC Line Rated Disc Capacitors

Vishay Cera-Mite

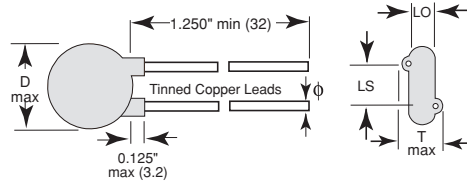
## INTERNATIONAL AGENCY APPROVALS



**Fig 5** TYPICAL FILTER SHOWING X & Y TYPES



**Fig 6**



**WIRE LEAD OFFSET**

Series	"LO" typ. in	mm
440L	.158"	(4.0)
30LV	.132"	(3.4)
30LVS	.125"	(3.2)
25Y	.060"	(1.5)
125L	.110"	(2.8)
20VL	.077"	(2.0)

## 440L SERIES AC RATED CERAMIC DISC CAPACITORS

Rugged, High Dielectric Strength, Full UL Recognition, X1 & Y1 Applications

UL 1414	UL 1283	CSA 22.2	IEC 384-14
Across-The-Line	EMI Filters	No. 1 - Across-The-Line	<b>2nd Edition</b>
Antenna Coupling		No. 1 - Isolation	Y1 - 500 VAC
Line-By-Pass			X1 - 400 VAC

## 30LV SERIES AC RATED CERAMIC DISC CAPACITORS

Full UL 1414 Recognition, X1 & Y2 Applications

UL 1414	UL 1283	CSA 22.2	IEC 384-14
Across-The-Line	EMI Filters	No. 1 - Across-The-Line	<b>2nd Edition</b>
Antenna Coupling		No. 1 - Isolation	Y2 - 300 VAC
Line-By-Pass		No. 8 - EMI Filters	X1 - 400 VAC

VALUE pF	TOL	VISHAY CERA-MITE NUMBER	AC LEAKAGE $I_L$ mA	TEMP CHAR.	D DIAMETER (in/mm)	T THICKNESS (in/mm)	LS LEAD SPACE (in/mm)	$\phi$ WIRE SIZE (AWG/in/mm)
10	K	440LQ10	1.3 uA	COG	.330 (8.4)	.195 (5.0)	.375 (9.5)	20 .032 (.81)
15	K	440LQ15	2.0 uA	U2J	.330 (8.4)	.210 (5.3)	.375 (9.5)	20 .032 (.81)
22	K	440LQ22	3.0 uA	P3K	.330 (8.4)	.190 (4.8)	.375 (9.5)	20 .032 (.81)
33	K	440LQ33	4.4 uA	R3L	.330 (8.4)	.200 (5.1)	.375 (9.5)	20 .032 (.81)
47	K	440LQ47	6.3 uA	R3L	.330 (8.4)	.180 (4.6)	.375 (9.5)	20 .032 (.81)
68	K	440LQ68	0.01	X7R	.330 (8.4)	.220 (5.6)	.375 (9.5)	20 .032 (.81)
100	K	440LT10	0.02	X7R	.330 (8.4)	.220 (5.6)	.375 (9.5)	20 .032 (.81)
150	K	440LT15	0.03	X7R	.330 (8.4)	.235 (6.0)	.375 (9.5)	20 .032 (.81)
220	K	440LT22	0.04	X7R	.330 (8.4)	.235 (6.0)	.375 (9.5)	20 .032 (.81)
330	K	440LT33	0.05	X7R	.330 (8.4)	.225 (5.7)	.375 (9.5)	20 .032 (.81)
470	M	440LT47	0.07	Y5U	.330 (8.4)	.230 (5.8)	.375 (9.5)	20 .032 (.81)
560	M	440LT56	0.08	Y5U	.330 (8.4)	.230 (5.8)	.375 (9.5)	20 .032 (.81)
680	M	440LT68	0.10	Y5U	.330 (8.4)	.235 (6.0)	.375 (9.5)	20 .032 (.81)
1000	M	440LD10	0.15	Y5U	.365 (9.3)	.220 (5.6)	.375 (9.5)	20 .032 (.81)
1500	M	440LD15	0.23	Y5U	.365 (9.3)	.220 (5.6)	.375 (9.5)	20 .032 (.81)
2000	M	440LD20	0.30	Y5U	.400 (10.2)	.220 (5.6)	.375 (9.5)	20 .032 (.81)
2200	M	440LD22	0.34	Y5U	.430 (10.9)	.225 (5.7)	.375 (9.5)	20 .032 (.81)
2700	M	440LD27	0.41	Y5U	.460 (11.7)	.225 (5.7)	.375 (9.5)	20 .032 (.81)
2800	M	440LD28	0.43	Y5U	.460 (11.7)	.220 (5.6)	.375 (9.5)	20 .032 (.81)
3000	M	440LD30	0.46	Y5U	.490 (12.4)	.225 (5.7)	.375 (9.5)	20 .032 (.81)
3200	M	440LD32	0.49	Y5U	.490 (12.4)	.220 (5.6)	.375 (9.5)	20 .032 (.81)
3300	M	440LD33	0.50	Y5U	.490 (12.4)	.215 (5.5)	.375 (9.5)	20 .032 (.81)
3900	M	440LD39	0.59	Y5U	.530 (13.5)	.220 (5.6)	.375 (9.5)	20 .032 (.81)
4000	M	440LD40	0.61	Y5U	.530 (13.5)	.220 (5.6)	.375 (9.5)	20 .032 (.81)
4700	M	440LD47	0.71	Y5U	.620 (15.7)	.230 (5.8)	.375 (9.5)	20 .032 (.81)
5000	M	440LD50	0.76	Y5U	.620 (15.7)	.225 (5.7)	.375 (9.5)	20 .032 (.81)
5500	M	440LD55	0.84	Y5U	.680 (17.3)	.230 (5.8)	.375 (9.5)	20 .032 (.81)
5600	M	440LD56	0.85	Y5U	.680 (17.3)	.230 (5.8)	.375 (9.5)	20 .032 (.81)
6800	M	440LD68	1.04	Y5U	.720 (18.3)	.235 (6.0)	.375 (9.5)	20 .032 (.81)
8000	M	440LD80	1.22	Y5U	.720 (18.3)	.220 (5.6)	.375 (9.5)	20 .032 (.81)
9000	M	440LD90	1.37	Y5U	.790 (20.1)	.225 (5.7)	.375 (9.5)	20 .032 (.81)
.01 $\mu$ F	M	440LS10	1.52	Y5U	.850 (21.6)	.230 (5.8)	.375 (9.5)	20 .032 (.81)

Note 5

Note 6

VALUE pF	TOL	VISHAY CERA-MITE NUMBER	AC LEAKAGE $I_L$ mA	TEMP CHAR.	D DIAMETER (in/mm)	T THICKNESS (in/mm)	LS LEAD SPACE (in/mm)	F WIRE SIZE (AWG/in/mm)
10	K	30LVQ10	1.3 uA	COG	.330 (8.4)	.185 (4.7)	.250 (6.4)	22 .025 (.64)
15	K	30LVQ15	2.0 uA	U2J	.330 (8.4)	.200 (5.1)	.250 (6.4)	22 .025 (.64)
22	K	30LVQ22	3.0 uA	P3K	.330 (8.4)	.180 (4.6)	.250 (6.4)	22 .025 (.64)
33	K	30LVQ33	4.4 uA	R3L	.330 (8.4)	.190 (4.8)	.250 (6.4)	22 .025 (.64)
47	K	30LVQ47	6.3 uA	R3L	.330 (8.4)	.170 (4.3)	.250 (6.4)	22 .025 (.64)
68	K	30LVQ68	0.01	S3L	.330 (8.4)	.175 (4.4)	.250 (6.4)	22 .025 (.64)
100	K	30LVT10	0.02	X7R	.330 (8.4)	.180 (4.6)	.250 (6.4)	22 .025 (.64)
150	K	30LVT15	0.03	X7R	.330 (8.4)	.180 (4.6)	.250 (6.4)	22 .025 (.64)
220	K	30LVT22	0.04	X7R	.330 (8.4)	.195 (5.0)	.250 (6.4)	22 .025 (.64)
330	K	30LVT33	0.05	X7R	.330 (8.4)	.195 (5.0)	.250 (6.4)	22 .025 (.64)
470	K	30LVT47	0.08	X7R	.330 (8.4)	.180 (4.6)	.250 (6.4)	22 .025 (.64)
560	K	30LVT56	0.09	X7R	.330 (8.4)	.200 (5.1)	.250 (6.4)	22 .025 (.64)
680	K	30LVT68	0.11	X7R	.330 (8.4)	.180 (4.6)	.250 (6.4)	22 .025 (.64)
680	M	30LVT68	0.10	Y5U	.330 (8.4)	.220 (5.6)	.250 (6.4)	22 .025 (.64)
1000	K	30LVT10	0.16	X7R	.365 (9.3)	.185 (4.7)	.250 (6.4)	22 .025 (.64)
1000	M	30LVD10	0.15	Y5U	.330 (8.4)	.215 (5.5)	.250 (6.4)	22 .025 (.64)
1500	K	30LVD15	0.24	X7R	.460 (11.7)	.180 (4.6)	.250 (6.4)	22 .025 (.64)
1500	M	30LVD15	0.23	Y5U	.330 (8.4)	.195 (5.0)	.250 (6.4)	22 .025 (.64)
2000	M	30LVD20	0.31	Y5U	.400 (10.2)	.210 (5.3)	.250 (6.4)	22 .025 (.64)
2200	M	30LVD22	0.34	Y5U	.400 (10.2)	.200 (5.1)	.250 (6.4)	22 .025 (.64)
2700	M	30LVD27	0.41	Y5U	.430 (10.9)	.200 (5.1)	.250 (6.4)	22 .025 (.64)
2800	M	30LVD28	0.43	Y5U	.430 (10.9)	.200 (5.1)	.250 (6.4)	22 .025 (.64)
3000	M	30LVD30	0.46	Y5U	.460 (11.7)	.205 (5.2)	.250 (6.4)	22 .025 (.64)
3200	M	30LVD32	0.49	Y5U	.460 (11.7)	.200 (5.1)	.250 (6.4)	22 .025 (.64)
3300	M	30LVD33	0.50	Y5U	.460 (11.7)	.195 (5.0)	.250 (6.4)	22 .025 (.64)
3900	M	30LVD39	0.59	Y5U	.490 (12.4)	.200 (5.1)	.250 (6.4)	22 .025 (.64)
4000	M	30LVD40	0.61	Y5U	.530 (13.5)	.210 (5.3)	.250 (6.4)	22 .025 (.64)
4700	M	30LVD47	0.72	Y5U	.620 (15.7)	.220 (5.6)	.375 (9.5)	20 .032 (.81)
5000	M	30LVD50	0.76	Y5U	.620 (15.7)	.215 (5.5)	.375 (9.5)	20 .032 (.81)
5500	M	30LVD55	0.84	Y5U	.560 (14.2)	.195 (5.0)	.375 (9.5)	20 .032 (.81)
5600	M	30LVD56	0.85	Y5U	.560 (14.2)	.195 (5.0)	.375 (9.5)	20 .032 (.81)
6800	M	30LVD68	1.04	Y5U	.680 (17.3)	.205 (5.2)	.375 (9.5)	20 .032 (.81)
8000	M	30LVD80	1.22	Y5U	.680 (17.3)	.195 (5.0)	.375 (9.5)	20 .032 (.81)
9000	M	30LVD90	1.37	Y5U	.720 (18.3)	.200 (5.1)	.375 (9.5)	20 .032 (.81)
.01 $\mu$ F	M	30LVS10	1.52	Y5U	.790 (20.1)	.190 (4.8)	.375 (9.5)	20 .032 (.81)
.015 $\mu$ F	M	30LVS15*	2.28	Y5U	.900 (22.9)	.200 (5.1)	.375 (9.5)	20 .032 (.81)

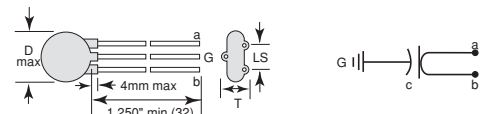
Note 5

Note 6

\* 30LVS15 not available with UL 1414 recognition.

## Fig 7 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 other electrode. Used in feed-thru or line-to-ground applications, it allows a short ground lead for enhanced high frequency performance.



# 440L, 30LV, 30LVS, 25Y, 125L, 20VL Series



Vishay Cera-Mite

AC Line Rated Disc Capacitors

## INTERNATIONAL SAFETY AGENCY APPROVALS

Agency Files/ Licenses	440L	30LV	30LVS	25Y	125L	20VL
<b>Underwriters Laboratories Inc.</b>						
UL 1414 Antenna-Coupling Components	E99264	E99264	—	—	—	—
UL 1414 Line-By-Pass Components	—	—	E99264	E99264	E99264	—
UL 1283 Electromagnetic Interference Filters	E128046	E99264	E128046	E99264	—	E128046
<b>Canadian Standards Association:</b>						
CSA 22.2 No.1 Across-The-Line, Isolation	LR62016	LR62016	—	—	—	—
CSA 22.2 No.1 Isolation	—	—	LR62016	LR62016	LR62016	—
CSA 22.2 No. 8 EMI Filters	—	LR62016	LR62016	LR62016	—	LR62016
<b>European CENELEC Electronic Components Committee (CECC)</b>						
<b>Country Certifications:</b>						
<b>Specification EN 132 400 to Publication IEC 384-14 Table 11, Edition 2 (1993)</b>						
VDE	14239 - 4670	14239 - 4670	14239 - 4670	14239 - 4670	14239 - 4670	14239 - 4670
SEV	95,771173	95,771173	95,771173	95,771173	95,771173	95,771173
SEMKO	954311001	961416201	961416301	954311601	954310601	9543108801
NEMKO	P95104257	P96101228	P96101227	P95104253	P95104252	P95104254
DEMKO	304885	304886	304887	304883	304882	304884
FIMKO	187550 - 01	190061 - 01	190059 - 01	187547 - 01	187548 - 01	187549 - 01

### 30LVS SERIES AC RATED CERAMIC DISC CAPACITORS

Compact Size for EMI Filtering, X1 & Y2 Applications

UL 1414	UL 1283	CSA 22.2	IEC 384-1
Line-By-Pass	EMI Filters	No. 1 - Isolation No. 8 - EMI Filters	2nd Edition Y2 - 250 VAC X1 - 400 VAC

### 25Y SERIES AC RATED CERAMIC DISC CAPACITORS

Temperature Stable Y5S (-30°C to +85°C ±22%),

UL 1414	UL 1283	CSA 22.2	IEC 384-14
Line-By-Pass	EMI Filters	No. 1 - Isolation No. 8 - EMI Filters	2nd Edition Y2 - 250 VAC X1 - 400 VAC

VALUE pF	TOL	VISHAY CERA-MITE NUMBER	AC LEAK, I <sub>L</sub> mA	TEMP CHAR.	D DIAMETER (in/mm)	T THICK. (in/mm)	LS LEAD SPACE (in/mm)	F WIRE SIZE (AWG/in/mm)
1000	M	30LVSD10	0.15	Y5U	.330 (8.4)	.195 (5.0)	.250 (6.4)	22 .025 (.64)
1500	M	30LVSD15	0.23	Y5U	.330 (8.4)	.185 (4.7)	.250 (6.4)	22 .025 (.64)
2000	M	30LVSD20	0.31	Y5U	.330 (8.4)	.175 (4.4)	.250 (6.4)	22 .025 (.64)
2200	M	30LVSD22	0.34	Y5U	.330 (8.4)	.170 (4.3)	.250 (6.4)	22 .025 (.64)
2700	M	30LVSD27	0.41	Y5U	.365 (9.3)	.180 (4.6)	.250 (6.4)	22 .025 (.64)
2800	M	30LVSD28	0.43	Y5U	.365 (9.3)	.180 (4.6)	.250 (6.4)	22 .025 (.64)
3000	M	30LVSD30	0.46	Y5U	.400 (10.2)	.180 (4.6)	.250 (6.4)	22 .025 (.64)
3200	M	30LVSD32	0.49	Y5U	.400 (10.2)	.175 (4.4)	.250 (6.4)	22 .025 (.64)
3300	M	30LVSD33	0.50	Y5U	.400 (10.2)	.175 (4.4)	.250 (6.4)	22 .025 (.64)
3900	M	30LVSD39	0.59	Y5U	.460 (11.7)	.185 (4.7)	.250 (6.4)	22 .025 (.64)
4000	M	30LVSD40	0.61	Y5U	.490 (12.4)	.185 (4.7)	.250 (6.4)	22 .025 (.64)
4700	M	30LVSD47	0.72	Y5U	.490 (12.4)	.180 (4.6)	.250 (6.4)	22 .025 (.64)
4700	M	30LVSD47	0.72	Y5V	.430 (10.9)	.185 (4.7)	.250 (6.4)	22 .025 (.64)
5000	M	30LVSD50	0.76	Y5U	.530 (13.5)	.180 (4.6)	.250 (6.4)	22 .025 (.64)
5500	M	30LVSD55	0.84	Y5U	.530 (13.5)	.185 (4.7)	.250 (6.4)	22 .025 (.64)
6800	M	30LVSD68	1.04	Y5U	.620 (15.7)	.200 (5.1)	.375 (9.5)	20 .032 (.81)
.010µF	M	30LVSS10	1.52	Y5U	.720 (18.3)	.200 (5.1)	.375 (9.5)	20 .032 (.81)
.010µF	M	30LVSVS10	1.52	Y5V	.620 (15.7)	.200 (5.1)	.375 (9.5)	20 .032 (.81)

Note 5

Note 6

### 125L SERIES AC RATED CERAMIC DISC CAPACITORS

Economical, Line-by-Pass, X1 & Y4 Applications

UL 1414	CSA 22.2	IEC 384-14 2nd Edition
Line-By-Pass	No. 1 - Isolation	Y4 - 125 VAC X1 - 400 VAC

VALUE pF	TOL	VISHAY CERA-MITE NUMBER	AC LEAK, I <sub>L</sub> mA	TEMP CHAR.	D DIAMETER (in/mm)	T THICKNESS (in/mm)	LS LEAD SPACE (in/mm)	φ WIRE SIZE (AWG/in/mm)
1000	M	125LD10	0.07	Y5V	.330 (8.4)	.195 (5.0)	.250 (6.4)	20 .032 (.81)
1500	M	125LD15	0.11	Y5V	.330 (8.4)	.195 (5.0)	.250 (6.4)	20 .032 (.81)
2000	M	125LD20	0.15	Y5V	.330 (8.4)	.185 (4.7)	.250 (6.4)	20 .032 (.81)
2200	M	125LD22	0.17	Y5V	.330 (8.4)	.180 (4.6)	.250 (6.4)	20 .032 (.81)
3300	M	125LD33	0.25	Y5V	.365 (9.3)	.195 (5.0)	.250 (6.4)	20 .032 (.81)
4700	M	125LD47	0.36	Y5V	.400 (10.2)	.185 (4.7)	.250 (6.4)	20 .032 (.81)
5000	M	125LD50	0.38	Y5V	.430 (10.9)	.195 (5.0)	.375 (9.5)	20 .032 (.81)
6800	M	125LD68	0.52	Y5V	.490 (12.4)	.190 (4.8)	.375 (9.5)	20 .032 (.81)
8200	M	125LD82	0.63	Y5V	.530 (13.5)	.190 (4.8)	.375 (9.5)	20 .032 (.81)
.010µF	M	125LS10	0.76	Y5V	.560 (14.2)	.190 (4.8)	.375 (9.5)	20 .032 (.81)
.015µF	M	125LS15	1.14	Y5V	.720 (18.3)	.205 (5.2)	.375 (9.5)	20 .032 (.81)
.018µF	M	125LS18	1.37	Y5V	.790 (20.1)	.205 (5.2)	.375 (9.5)	20 .032 (.81)
.020µF	M	125LS20	1.52	Y5V	.620 (15.7)	.240 (6.1)	.375 (9.5)	22 .025 (.64)
.022µF	M	125LS22	1.67	Y5V	.900 (22.9)	.185 (4.7)	.375 (9.5)	20 .032 (.81)
.030µF	M	125LS30	2.28	Y5V	.720 (18.3)	.240 (6.1)	.375 (9.5)	22 .025 (.64)
.050µF	M	125LS50	3.80	Y5V	.900 (22.9)	.240 (6.1)	.375 (9.5)	22 .025 (.64)

Note 5

Note 6

VALUE pF	TOL	VISHAY CERA-MITE NUMBER	AC LEAK, I <sub>L</sub> mA	TEMP CHAR.	D DIAMETER (in/mm)	T THICKNESS (in/mm)	LS LEAD SPACE (in/mm)	φ WIRE SIZE (AWG/in/mm)
1000	M	25YD10	0.17	Y5S	.330 (8.4)	.170 (4.3)	.250 (6.4)	22 .025 (.64)
1500	M	25YD15	0.25	Y5S	.400 (10.2)	.175 (4.4)	.250 (6.4)	22 .025 (.64)
2000	M	25YD20	0.33	Y5S	.430 (10.9)	.170 (4.3)	.250 (6.4)	22 .025 (.64)
2200	M	25YD22	0.36	Y5S	.460 (11.7)	.170 (4.3)	.250 (6.4)	22 .025 (.64)
2700	M	25YD27	0.45	Y5S	.490 (12.4)	.170 (4.3)	.250 (6.4)	22 .025 (.64)
2800	M	25YD28	0.46	Y5S	.530 (13.5)	.175 (4.4)	.250 (6.4)	22 .025 (.64)
3000	M	25YD30	0.50	Y5S	.530 (13.5)	.175 (4.4)	.250 (6.4)	22 .025 (.64)
3200	M	25YD32	0.53	Y5S	.560 (14.2)	.185 (4.7)	.375 (9.5)	20 .032 (.81)
3300	M	25YD33	0.55	Y5S	.560 (14.2)	.185 (4.7)	.375 (9.5)	20 .032 (.81)
3900	M	25YD39	0.64	Y5S	.620 (15.7)	.185 (4.7)	.375 (9.5)	20 .032 (.81)
4000	M	25YD40	0.66	Y5S	.620 (15.7)	.185 (4.7)	.375 (9.5)	20 .032 (.81)
4700	M	25YD47	0.78	Y5S	.680 (17.3)	.185 (4.7)	.375 (9.5)	20 .032 (.81)
5000	M	25YD50	0.83	Y5S	.680 (17.3)	.185 (4.7)	.375 (9.5)	20 .032 (.81)
5500	M	25YD55	0.91	Y5S	.720 (18.3)	.190 (4.8)	.375 (9.5)	20 .032 (.81)
5600	M	25YD56	0.92	Y5S	.720 (18.3)	.190 (4.8)	.375 (9.5)	20 .032 (.81)
6800	M	25YD68	1.12	Y5S	.790 (20.1)	.185 (4.7)	.375 (9.5)	20 .032 (.81)
8000	M	25YD80	1.32	Y5S	.900 (22.9)	.200 (5.1)	.375 (9.5)	20 .032 (.81)

Note 5

Note 6

### 20VL SERIES AC RATED CERAMIC DISC CAPACITORS

High Cap Valve, Compact Size, X2 Applications

UL 1283	CSA 22.2	IEC 384-14 2nd Edition
EMI Filters	No. 8 - EMI Filters	X2 - 400 VAC

VALUE µF	TOL	VISHAY CERA-MITE NUMBER	TEMP CHAR.	D DIAMETER (in/mm)	T THICKNESS (in/mm)	LS LEAD SPACE (in/mm)	φ WIRE SIZE (AWG/in/mm)
.009	M	20VLD90	Y5V	.530 (13.5)	.150 (3.8)	.375 (9.5)	22 .025 (.64)
.010	M	20VLS10	Y5V	.620 (15.7)	.150 (3.8)	.375 (9.5)	22 .025 (.64)
.010	Z	20VLS20	Z5U	.530 (13.5)	.160 (4.1)	.250 (6.4)	22 .025 (.64)
.020	Z	20VLS20	Y5V	.720 (18.3)	.150 (3.8)	.375 (9.5)	22 .025 (.64)
.100	M	20VLP10*	Y5V	.940 (23.9)	.240 (6.1)	.375 (9.5)	22 .025 (.64)

Note 6

\* 20VLP10 not available with CSA 22.2 No. 8 recognition.



## Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.