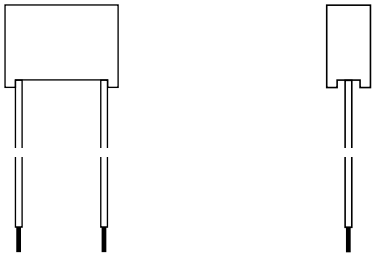
Interference Suppression Film Capacitors
MKT Radial Potted Type, Class X2



FEATURES

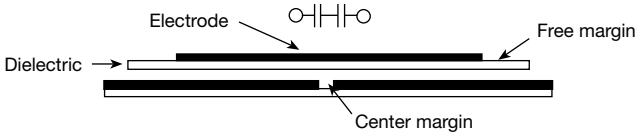
- Material categorization:
  For definitions of compliance please see www.vishay.com/doc?99912

Pb-free

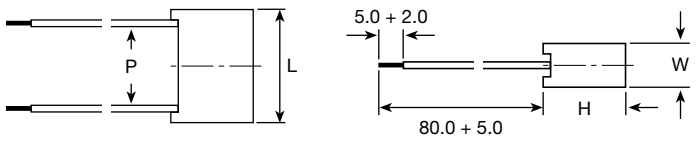
e3

RoHS COMPLIANT

MAXIMUM PULSE RISE TIME: (dU/dt) IN V/µs				
RATED VOLTAGE	PITCH P (mm)			
	≤ 15.0	≤ 22.5	≤ 27.5	≤ 37.5
310 V_{AC}	200	150	100	100

QUICK REFERENCE DATA	
Capacitance range	E12 series 0.01 µF X2 to 2.2 µF X2 preferred values acc. to E6
Capacitance tolerance	Standard: ± 10 %
Rated AC voltage	310 V_{AC}, 50 Hz/60 Hz
Permissible DC voltage	630 V_{DC}
Climatic testing class acc. to EN 60068-1	40/100/56
Reference standards	EN 132 400, 1994 EN 60068-1 IEC 60384-14/2, 1993 UL 1283 UL 1414 CSA 22.2 No. 8-M 86 CSA 22.2 No. 1-M 90
Dielectric	Polyester film
Electrodes	Metal evaporated
Construction	Metallized film capacitor Internal series connection 
Terminals	Insulated stranded copper wire, type LiY 0.5 mm² (or AWG 20) ends stripped
Insulation resistance for C ≤ 0.33 µF	30 GΩ average value 15 GΩ minimum value
Coating	Plastic case, epoxy resin sealed, flame retardant UL 94 V-0
Dissipation factor tan δ	< 1 % measured at 1 kHz
Time constant for C > 0.33 µF	10 000 s average value 5000 s minimum value
Test voltage	(Electrode/electrode): 2150 V_{DC}/2 s Between interconnected terminations and case (foil method): 2500 V_{AC} for 2 s at 25 °C

DIMENSIONS in millimeters



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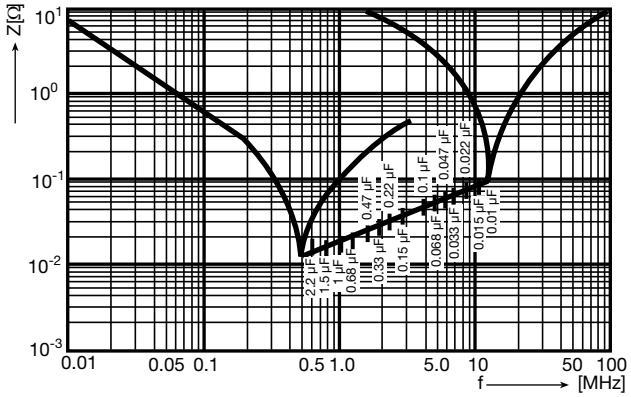

Impedance (Z) as a function of frequency (f) at T_a = 20 °C (average).
Measurement with lead length 80 mm.

APPROVALS

COUNTRY	SPECIFICATION	ELECTRICAL VALUES	APPROVAL REFERENCE	APPROVAL MARK
U.S.A. (for 250 V_{AC})	UL 1283 UL 1414	0.01 µF to 2.2 µF X 0.01 µF to 1.0 µF X	E 76297 E 100682	
CB TEST-CERTIFICATE (for 310 V_{AC})		0.01 µF to 2.2 µF X2	DE1-40110/A1	
Germany	EN 132 400; 1999 IEC 60384-14, 2nd edition, 1995	0.01 µF to 2.2 µF X2	40005079	
This approval mark together with the CB-certificate replace all national approval marks of the following countries (they have already signed the CB-agreement):				
Austria	Belgium	Denmark	Finland	Sweden
France	Germany	Ireland	Italy	Switzerland
Netherlands	Israel	Portugal	Spain	Great Britain
Japan	Norway	China	Poland	Czech. Republic
Singapore	Rep. of Korea	Hungary	Iceland	Slovenia

ELECTRICAL DATA

U_{RAC} (V)	CAP. (µF)	TOL. (%)	PITCH P (mm)	BOX NO.	DIMENSIONS W x H x L (+ 0.2 mm/- 0.4 mm) (mm)	WEIGHT (g)	QUANTITY PACKAGE (pcs)	ORDERING CODE [2]
310	**0.010**	**± 10**	**15.0**	**05**	**5.3 x 10.3 x 17.8**	**2.6**	**1000**	**F1774-310-2 . . .-E3**
	0.012	± 10	15.0	05	5.3 x 10.3 x 17.8	2.6	1000	F1774-312-2 . . .-E3
	0.015	**± 10**	**15.0**	**05**	**5.3 x 10.3 x 17.8**	**2.6**	**1000**	**F1774-315-2 . . .-E3**
	0.018	± 10	15.0	05	5.3 x 10.3 x 17.8	2.6	1000	F1774-318-2 . . .-E3
	0.022	**± 10**	**15.0**	**05**	**5.3 x 10.3 x 17.8**	**2.6**	**1000**	**F1774-322-2 . . .-E3**
	0.027	± 10	15.0	05	5.3 x 10.3 x 17.8	2.6	1000	F1774-327-2 . . .-E3
	0.033	**± 10**	**15.0**	**05**	**5.3 x 10.3 x 17.8**	**2.6**	**1000**	**F1774-333-2 . . .-E3**
	0.039	± 10	15.0	06	6.3 x 12.3 x 17.8	3.2	850	F1774-339-2 . . .-E3
	0.047	**± 10**	**15.0**	**06**	**6.3 x 12.3 x 17.8**	**3.2**	**850**	**F1774-347-2 . . .-E3**
	0.056	± 10	15.0	06	6.3 x 12.3 x 17.8	3.2	850	F1774-356-2 . . .-E3
	0.068	**± 10**	**15.0**	**07**	**7.3 x 13.3 x 17.8**	**3.6**	**800**	**F1774-368-2 . . .-E3**
	0.082	± 10	15.0	08	8.3 x 14.3 x 17.8	3.9	800	F1774-382-2 . . .-E3

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ELECTRICAL DATA

U_{RAC} (V)	CAP. (µF)	TOL. (%)	PITCH P (mm)	BOX NO.	DIMENSIONS W x H x L (+ 0.2 mm/- 0.4 mm) (mm)	WEIGHT (g)	QUANTITY PACKAGE (pcs)	ORDERING CODE [2]
310	**0.10**	**± 10**	**15.0 [1]**	**08**	**8.3 x 14.3 x 17.8**	**3.9**	**800**	**F1774-410-2 . . .-E3**
	0.12	± 10	15.0 [1]	08	8.3 x 14.3 x 17.8	3.9	800	F1774-412-2 . . .-E3
	0.15	**± 10**	**22.5 [1]**	**11**	**7.3 x 15.3 x 26.3**	**5.3**	**500**	**F1774-415-2 . . .-E3**
	0.18	± 10	22.5 [1]	11	7.3 x 15.3 x 26.3	5.3	500	F1774-418-2 . . .-E3
	0.22	**± 10**	**22.5 [1]**	**12**	**8.3 x 16.3 x 26.3**	**5.8**	**500**	**F1774-422-2 . . .-E3**
	0.27	± 10	22.5 [1]	13	10.3 x 18.3 x 26.3	7.9	500	F1774-427-2 . . .-E3
	0.33	**± 10**	**22.5 [1]**	**13**	**10.3 x 18.3 x 26.3**	**7.9**	**500**	**F1774-433-2 . . .-E3**
	0.39	± 10	27.5 [1]	14	11.0 x 21.0 x 31.0	10.3	350	F1774-439-2 . . .-E3
	0.47	± 10	27.5 [1]	14	11.0 x 21.0 x 31.0	10.3	350	F1774-447-2 . . .-E3
	0.56	± 10	27.5 [1]	14	11.0 x 20.3 x 31.3	10.3	350	F1774-456-2 . . .-E3
	0.68	**± 10**	**27.5 [1]**	**15**	**13.3 x 23.3 x 31.3**	**14.1**	**300**	**F1774-468-2 . . .-E3**
	0.82	± 10	27.5 [1]	15	13.0 x 23.3 x 31.3	16.2	250	F1774-482-2 . . .-E3
	1.0	**± 10**	**27.5 [1]**	**18**	**14.5 x 24.3 x 31.3**	**16.2**	**250**	**F1774-510-2 . . .-E3**
	1.2	± 10	37.5 [1]	16	14.0 x 24.3 x 41.3	20.1	200	F1774-512-2 . . .-E3
	1.5	**± 10**	**37.5 [1]**	**19**	**15.5 x 28.3 x 41.3**	**20.1**	**200**	**F1774-515-2 . . .-E3**
	1.8	± 10	37.5 [1]	19	15.5 x 28.3 x 41.3	25.2	150	F1774-518-2 . . .-E3
	2.2	**± 10**	**37.5 [1]**	**20**	**17.8 x 32.3 x 41.3**	**32.8**	**200**	**F1774-522-2 . . .-E3**

Notes

- Preferred values in bold print.
- Inbuilt discharging resistor on request (with larger case dimensions).
- The suffix “E3” is used for the RoHS-compliant version, although in most cases this is the only available version.

[1] Different pitch on request.

[2] With mark, the ordering code is F1774-. . .-2400-E3.

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