

**[1] Features**

International Safety approvals.  
 Self-healing.  
 Wide temperature range.  
 For worldwide use in all X1 and across-the-line applications.  
 Pb(lead)-free product.  
 RoHS Compliant product.


**RoHS Compliant**
**[2] Construction**

- ① **Style** :radial,rectangular thermo-plastic box.
- ② **Winding** :non-inductively wound self-healing metallized polypropylene film encapsulated with self-extinguishing epoxy resin in a flame retardant box(UL 94V-0).
- ③ **Termination** :Pb-free tinned leads.

**[3] Specifications**
**① General data**

<b>Applicable standard</b>	IEC60384-14,EN132400
<b>Rated voltage(URAC)50/60Hz</b>	440VAC
<b>Capacitance range</b>	0.01uF~1.0uF
<b>Capacitance tolerance</b>	±10%(K),±20%(M) at 20°C,1Khz
<b>Climatic category</b>	55/105/21
<b>Rated temperature(TR)</b>	+105°C
<b>Max. applicable temperature(Tmax)</b>	+105°C

**② Electrical data**

<b>Withstand voltage</b>	DC voltage(cut-off current 10mA)	3,400VDC 1min.		
	AC voltage between leads and case	2,400VAC 1min.		
<b>Dissipation factor(DF)</b>		at 1Khz	at 10Khz	at 100Khz
	CR ≤ 0.47uF	0.1%	0.2%	1.0%
	CR > 0.47uF	0.2%	0.7%	
<b>Insulation resistance(Rins)</b>	CR ≤ 0.33uF	> 15,000MΩ		
	CR > 0.33uF	> 5,000s		
	between leads and case	> 30,000MΩ		
<b>Permissible <math>\frac{dv}{dt}</math> value</b>	Pitch=15mm	Pitch=22.5mm	Pitch=27.5mm	
	250v/μs	150v/μs	100v/μs	

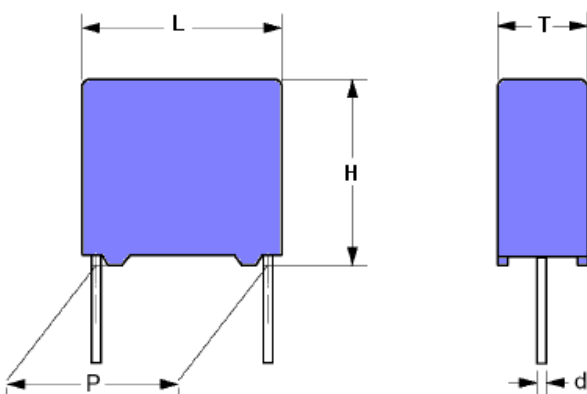
\*CR = Nominal Capacitance in μF

**[4] Ordering/part number information**

<b>CFS</b>	<b>99</b>	<b>P</b>	<b>F</b>	<b>X1</b>	<b>44</b>	<b>104</b>	<b>K</b>		<b>0150</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

- (1) Kind of capacitor:noise suppression capacitor on AC mains
- (2) Shape of capacitor:rectangular,thermo-plastic box,radial
- (3) Dielectrics:polypropylene
- (4) Operating temperature:-55~+105°C
- (5) Sub class:X1
- (6) URAC:expressed in tens of volts of AC.
- (7)\*Capacitance in pF:100,000pF=0.1uF
- (8)\*Capacitance tolerance:±10%
- (9)\*Packaging and lead configuration code:No code for bulk,loose parts in a poly.bag,straight long leads.
- (10)\*Lead pitch:15mm

\*For further details,refer to [\[Part numbering system & taping specification\]](#)

**[5] Dimensions in mm**


uF	L	H	T	d
<b>pitch 15.0mm</b>				
0.01	18.0	11.0	5.0	0.8
0.015	18.0	11.0	5.0	0.8
0.022	18.0	11.0	5.0	0.8
0.033	18.0	12.0	6.0	0.8
0.047	18.0	13.5	7.0	0.8
0.068	18.0	15.0	8.5	0.8
0.1	18.0	16.5	10.0	0.8
<b>pitch 22.5mm</b>				
0.068	26.0	15.5	6.0	0.8
0.1	26.0	16.5	7.0	0.8
0.15	26.0	18.0	8.5	0.8
0.22	26.0	19.5	10.0	0.8
0.33	26.0	23.0	13.0	0.8
<b>pitch 27.5mm</b>				
0.22	31.0	21.0	11.0	0.8
0.33	31.0	23.0	13.0	0.8
0.47	31.0	25.0	15.0	0.8
0.68	31.0	28.0	18.0	0.8
1.0	31.0	31.0	21.0	0.8

\*For further details, refer to  [General technical information of \(RFI/EMI\)noise suppression capacitors on AC mains](#)

