

THB

Class X2 EMI/RFI Boxed Metallized polypropylene film capacitors for high humidity environments



Features

- Metallized polypropylene
- Safety agency approved
- Small size
- Low self inductance
- Low ESR
- **85% R.H. operating humidity range**

Applications

- EMI Filter
- Line by pass
- **Outdoor applications**
- Across the line
- Antenna coupling
- Power meters

Specifications

Operating Temperature Range	-40°C to +110°C			
Capacitance Tolerance	±10% at 1 kHz, 20°C			
AC voltage (50/60 Hz)	CSA	ENEC	CQC	UL
	250/310 VAC	305 VAC	275 VAC	250/310 VAC
Dissipation Factor at 1 kHz and 20°C	Tan δ			
	.1% Max			
Insulation Resistance @20°C (<70% RH) for 1 minute at 100VDC applied	Capacitance	Terminal to Terminal	Terminal to Case	
	≤0.33uF	15000 MΩ	>30000 MΩ at 100VDC >5000 MΩ at 500VDC	
	>0.33uF	5000 MΩxuF	>30000 MΩ at 100VDC >5000 MΩ at 500VDC	
Self Inductance	≤1 nano-Henry per mm of lead spacing and lead length			
Dielectric Strength	Terminal to Terminal	C≤.0068uF, 1500 VAC or 2121 VDC applied for 60 Seconds C>.0068uF, 1000 VAC or 1768 VDC applied for 60 seconds Cut-off current: 2A ac or 10mAdc Current limiting resistance: 1Ω/V		
	Terminal to case	2050VDC applied between the terminals and case for 60 Seconds and 20°C		
Humidity test	1000 Hours at 85% RH, 85°C and 240VAC applied.			
	Capacitance change	≤10% of initially measured value		
	Dissipation Factor change	≤1.0% at 1kHz		
Insulation resistance change	≥50% of initially specified value (T-T)			
Capacitance temperature coefficient	-200ppm/°C, ±100ppm/°C			
Construction	Metallized Polypropylene film			
Electrodes	Vacuum deposited Metal layers			
Coating	Flame retardant Solvent resistant plastic case with epoxy end fill (UL94V-0)			
Lead terminations	Lead free tinned copper leads			



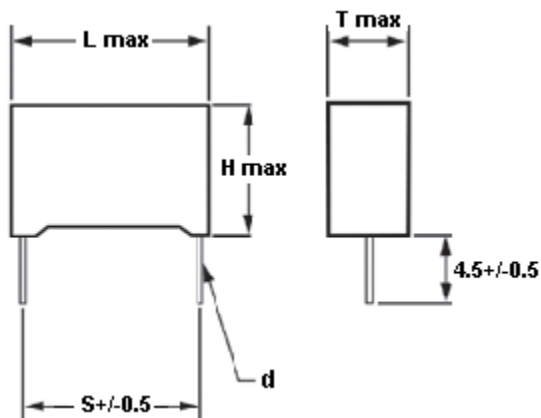
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Class X2 metalized polypropylene film capacitors for high humidity environments

Standard part listing

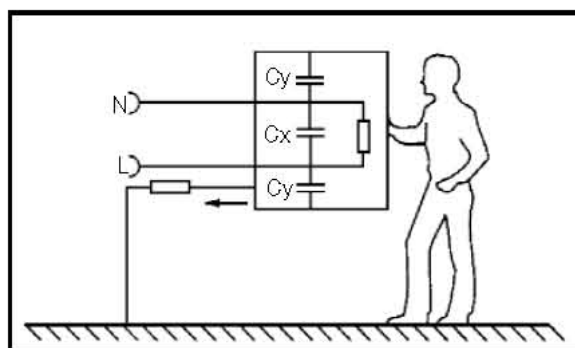
Capacitance (µF)	IC PART NUMBER	dv/dt (V/µs)	LxHxT (mm)	S Lead Spacing (mm)	d Lead Wire Diameter (mm)
0.047	473THB305KE	300	18x12x6	15	0.8
0.068	683THB305KE	300	18x13x7	15	0.8
0.1	104THB305KE	300	18x13.5x7.5	15	0.8
0.15	154THB305KE	300	18x13.5x7.5	15	0.8
0.15	154THB305KG	180	26x14.5x6	22.5	0.8
0.22	224THB305KE	300	18x15x9	15	0.8
0.22	224THB305KG	180	26x15x7.5	22.5	0.8
0.33	334THB305KE	300	18x18x10	15	0.8
0.33	334THB305KG	180	26x17x8	22.5	0.8
0.47	474THB305KE	300	18x19x12.5	15	0.8
0.47	474THB305KG	180	26x19x10	22.5	0.8

Capacitance (µF)	IC PART NUMBER	dv/dt (V/µs)	LxHxT (mm)	S Lead Spacing (mm)	d Lead Wire Diameter (mm)
0.47	474THB305KH	120	31x18x9	27.5	0.8
0.56	564THB305KG	180	26x20x10	22.5	0.8
0.56	564THB305KH	120	31x20x10	27.5	0.8
0.68	684THB305KG	180	26x20x11.5	22.5	0.8
0.68	684THB305KH	120	31x20x10	27.5	0.8
0.82	824THB305KG	180	26x22x12	22.5	0.8
0.82	824THB305KH	120	31x21x11	27.5	0.8
1	105THB305KG	120	26x24x13.5	22.5	0.8
1	105THB305KH	120	31x22x13	27.5	0.8
1.5	155THB305KH	120	31x24.5x15	27.5	0.8
2.2	225THB305KH	120	31x28x18	27.5	0.8



All dimensions in (mm)

17mm Minimum lead length available upon request



X capacitors are used to suppress electrical noise by reducing the input impedance of the device incorporating the capacitor.

X capacitors are connected across the supply line where failure of the capacitor will not result in personal exposure to electrical shock.

X2 capacitors are to be used in applications where the peak voltage is $\leq 1200V$.

Safety agency	Standard	Voltage	Class	Certificate number	
UL	UL 1414 (.0047 to 1uF)	250	FOWX2*	E317135	
	UL 1283 (.0047 to 2.2uF)	310	FOKY2^ FOKY8^	E317132	
CSA	C22.2 class 2221 01	(.001 to 0.68uF)	250	Antenna coupling, Line isolation, Across the line	241565
		(.0047 to 1.0 uF)	250	Antenna coupling, Line isolation, Across the line, Line to Ground	
	Class 2221 02 (.0047 to 10uF)	310	EMI		
	Class 2221 51 (.0047 to 1.0uF)	250	Audio/video equipment		
ENEC (SEMKO)	EN-132400/IEC 60384-14/ SE/0252-2A	305	X2	SE/07119	
CQC	GB/T14472-1998	275	X2	CQC07001021654 CQC07001021577	

*Antenna coupling, Line bypass, across the line

^Electromagnetic interference filter

