



Aritec Electronics Co., Ltd.

90 Moo 4 Ladkrabang Ind. Estate, Ladkrabang, Bangkok 10520

Phone: 66-23261215-7, Fax: 66-23260727, Email: aritec@loxinfo.co.th

SPECIFICATION

ACROSS-THE-LINE AND INTERFERENCE SUPPRESSION CAPACITOR CLASS X2 - MPX

1. REFERENCE STANDARDS :

UL 1414 , CSA C22.2

USED FOR ACROSS-THE LINE CAPACITORS, ANTENNA-COUPLING AND LINE-BY PASS COMPONENTS.

VDE	0565-1
SEV	IEC 384-14 Second Edition (1993) including AM.1 (1995) [Safety tests] / EN 132 400 (1994) [Safety tests]
SEMKO	IEC 384-14 Second Edition (1993) including AM.1 (1995) [Safety tests] / EN 132 400 (1994) [Safety tests]
DEMKO	IEC 384-14 Second Edition (1993) including AM.1 (1995) [Safety tests] / EN 132 400 (1994) [Safety tests]
NEMKO	IEC 384-14 Second Edition (1993) including AM.1 (1995) [Safety tests] / EN 132 400 (1994) [Safety tests]
FIMKO	IEC 384-14 Second Edition (1993) including AM.1 (1995) [Safety tests] / EN 132 400 (1994) [Safety tests]

USED FOR RADIO INTERFERENCE SUPPRESSION CAPACITORS.

2. RATED VOLTAGE : 250 / 275 VAC, 50 ~ 60 HZ
3. CAPACITANCE RANGE : 0.0047 μ F ~ 1.0 μ F
4. CAPACITANCE TOLERANCE : J ($\pm 5\%$), K ($\pm 10\%$), M ($\pm 20\%$)
5. DIELECTRIC : METALLIZED POLYPROPYLENE FILM
6. DISSIPATION FACTOR TAN δ : LESS THAN 0.1% AT 1K HZ / 20°C
7. INSULATION RESISTANCE : BETWEEN TERMINALS
(1) LESS THAN OR EQUAL TO 0.33 μ F $\geq 3 \times 10000 \text{ M}\Omega$
(2) GREATER THAN 0.33 μ F $\geq 1 \times 1000 \text{ M}\Omega$
MEASURED AT 100 $\pm$ 15 VDC, 60 Sec. / 20°C
8. WITHSTAND VOLTAGE :
APPLIED 1,200 VDC FOR 60 Sec. OR 2,100 VDC FOR 1 Sec.



Aritec Electronics Co., Ltd.

90 Moo 4 Ladkrabang Ind. Estate, Ladkrabang, Bangkok 10520

Phone: 66-23261215-7, Fax: 66-23260727, Email: aritec@loxinfo.co.th

INTERFERENCE SUPPRESSION X2 CAPACITOR (MPX)

9. CLIMATIC CATEGORY : IN ACCORDANCE WITH DIN 40040 GMF

G (MINIMUM LIMIT TEMPERATURE) = - 40°C

M (MAXIMUM LIMIT TEMPERATURE) = +100°C

F (HUMIDITY CATEGORY) = AVERAGE RELATIVE HUMIDITY $\leq$ 75%

95% FOR 30 DAYS PER YEAR CONTINUOUSLY

85% FOR THE REMAINING DAYS OCCAIONALLY

10. DRY HEAT RESISTANCE :

IN ACCORDANCE WITH DIN 40046 SHEET 1 OR IEC 68-2-2 TEST BA. CONDITIONS

TEST TEMPERATURE : $100 \pm 2^\circ\text{C}$

TEST DURATION : 1000 HOURS

TEST CRITERIA :

(1) APPEARANCE : NO VISIBLE DAMAGE AND NO LEAKAGE

(2) WITHSTAND VOLTAGE : $0.66 \times$ RATED WITHSTAND VOLTAGE 60 Sec.

(3) CAPACITANCE CHANCE : $\leq \pm 5\%$ OF THE INITIAL VALUE

(4) INSULATION RESISTANCE : $\geq 50\%$ OF INITIAL SPECIFIED VALUE

11. COLD RESISTANCE :

IN ACCORDANCE WITH DIN 40046 SHEET 1 OR IEC 68-2-1 TEST BA. CONDITIONS

TEST TEMPERATURE : $-40 \pm 2^\circ\text{C}$

TEST DURATION : 2 HOURS

TEST CRITERIA :

(1) APPEARANCE : NO VISIBLE DAMAGE

(2) WITHSTAND VOLTAGE : $0.66 \times$ RATED WITHSTAND VOLTAGE 60 Sec.

(3) CAPACITANCE CHANGE : $\leq \pm 5\%$ OF THE INITIAL VALUE

12. HUMIDITY TEST CONDITIONS :

TEST TEMPERATURE : $40^\circ\text{C} \pm 2^\circ\text{C}$

RELATIVE HUMIDITY : 90 - 95%

TEST DURATION : 500 HOURS

TEST CRITERIA :

(1) WITHSTAND VOLTAGE : $0.66 \times$ RATED WITHSTAND VOLTAGE 60 Sec.

(2) CAPACITANCE DRIFT : $\leq \pm 5\%$ OF THE INITIAL VALUE

(3) DISSIPATION FACTOR : $\leq 200\%$ OF INITIAL SPECIFIED VALUE

(4) INSULATION RESISTANCE : $\geq 50\%$ OF INITIAL SPECIFIED VALUE



Aritec Electronics Co., Ltd.

90 Moo 4 Ladkrabang Ind. Estate, Ladkrabang, Bangkok 10520

Phone: 66-23261215-7, Fax: 66-23260727, Email: aritec@loxinfo.co.th

INTERFERENCE SUPPRESSION X2 CAPACITOR (MPX)

13. LIFE TEST CONDITIONS :

TEST TEMPERATURE : $100^{\circ}\text{C} \pm 3^{\circ}\text{C}$

TEST VOLTAGE : 440 VAC AND 1,000 VAC / 60 HZ FOR A PERIOD OF 0.1 Sec.

ONCE EACH HOUR

TEST DURATION : 1,008 HOURS

TEST CRITERIA :

(1) APPEARANCE : NO VISIBLE DAMAGE AND NO LEAKAGE

(2) WITHSTAND VOLTAGE : $0.66 \times$ RATED WITHSTAND VOLTAGE 60 Sec.

(3) CAPACITANCE DRIFT : $\leq \pm 3\%$ OF THE INITIAL VALUE

(4) DISSIPATION FACTOR : $\leq 0.6 \times 10$ (0.06%) OF INCREASED VALUE

(5) INSULATION RESISTANCE : $\geq 50\%$ OF SPECIFIED VALUE

14. SOLERABILITY CONDITIONS :

SOLDER BATH TEMPERATURE : $230 \pm 5^{\circ}\text{C}$

SOLDER MATERIAL : 60% OF TIN + 40% OF LEAD

SOLDER TIME : 3 ± 0.5 Sec.

TEST CRITERIA :

75% OF THE SURFACE TINNING

15. SOLDERING HEAT RESISTANCE :

IN ACCORDANCE WITH DIN 40046 SHEET 18 OR IEC 68-2-20 TEST TA.1 & TB.1
CONDITIONS

SOLDER BATH TEMPERATURE : $260 \pm 5^{\circ}\text{C}$

SOLDER TIME : 5 ± 1 Sec.

CAPACITANCE BODY MAY LIE ON PRINTING CIRCUIT BOARD

TEST CRITERIA :

(1) APPEARANCE : NO DAMAGE AND GOOD TINNING

(2) CAPACITANCE CHANGE : $\leq \pm 3\%$ OF THE INITIAL VALUE

16. VIBRATION RESISTANCE :

IN ACCORDANCE WITH DIN 40046 SHEET 8 OR IEC 68-2-6 TEST FC CONDITIONS

FREQUENCY RANGE : 10 - 55 HZ

DISPLACEMENT AMPLITUDE : 0.75mm

CONFORMING TO MAX. : 10 g

TEST DURATION : 6 HOURS

TEST CRITERIA :

(1) APPEARANCE : NO VISIBLE DAMAGE

(2) CAPACITANCE CHANGE : $\leq \pm 2\%$ OF THE INITIAL VALUE



Aritec Electronics Co., Ltd.

90 Moo 4 Ladkrabang Ind. Estate, Ladkrabang, Bangkok 10520

Phone: 66-23261215-7, Fax: 66-23260727, Email: aritec@loxinfo.co.th

INTERFERENCE SUPPRESSION X2 CAPACITOR (MPX)

17. TENSILE STRENGTH OF TERMINALS :

IN ACCORDANCE WITH DIN 40046 SHEET 19 OR IEC 68-2-21 TEST UA. 1 CONDITIONS

TERMINAL	LOAD FORCE	HOLDING TIMES
DIA. (mm)	KG (N)	Sec.
≤ 0.5	0.5 (5)	10
> 0.5 to ≤ 0.8	1.0 (10)	10
> 0.8	2.0 (20)	20

TEST CRITERIA :

NO WIRE BREAKAGE AND NO DAMAGE OF CAPACITOR

18. BENDING OF TERMINALS :

IN ACCORDANCE WITH DAN 40046 SHEET 19 OR IEC 68-2-21 TEST UB. CONDITIONS

LOAD FORCE : 0.5 KG (5N)

BENDING TIME : TWO CONSECUTIVE BENDS (4 x 90 °C)

TEST CRITERIA :

NO WIRE BREAKAGE AND NO DAMAGE OF CAPACITOR

19. MARKING :

CAPACITORS ARE MARKED WITH TYPE IDENTIFICATON CAPACITANCE, CAPACITANCE TOLERANCE, RATED VOLTAGE, TEMPERATURE RANGE, NAME OF MANUFACTURER, DATE OF MANUFACTURE AND APPROVED CERTIFICATION MARKS..

MARKING EXAMPLE :





Aritec Electronics Co., Ltd.

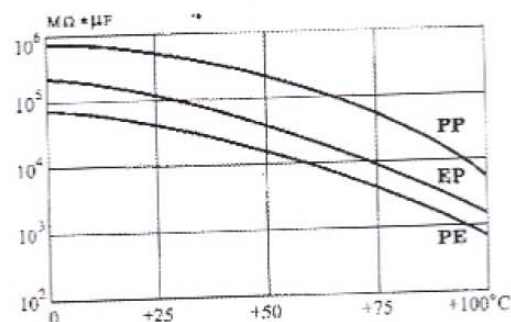
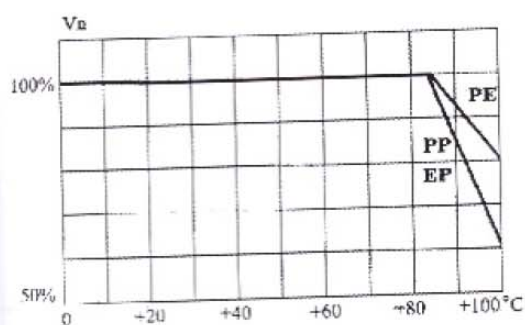
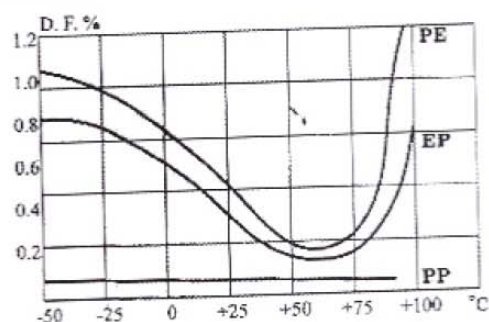
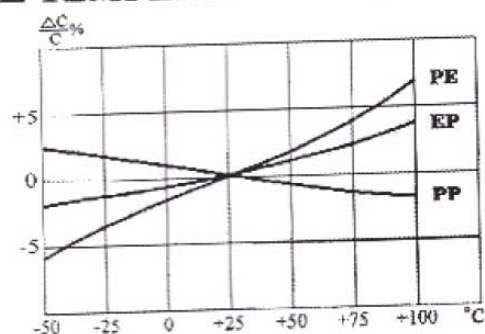
90 Moo 4 Ladkrabang Ind. Estate, Ladkrabang, Bangkok 10520

Phone: 66-23261215-7, Fax: 66-23260727, Email: aritec@loxinfo.co.th

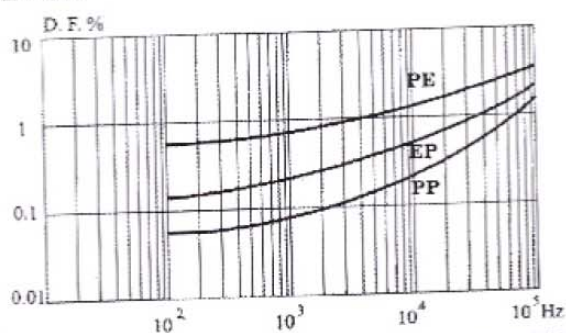
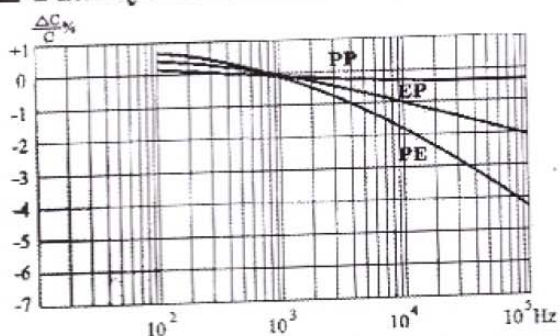
INTERFERENCE SUPPRESSION X2 CAPACITOR (MPX)

20. ELECTRICAL CHARACTERISTICS (TEMPERAURE AND FREQUENCY)

■ TEMPERATURE CHARACTERISTICS



■ FREQUENCY CHARACTERISTICS





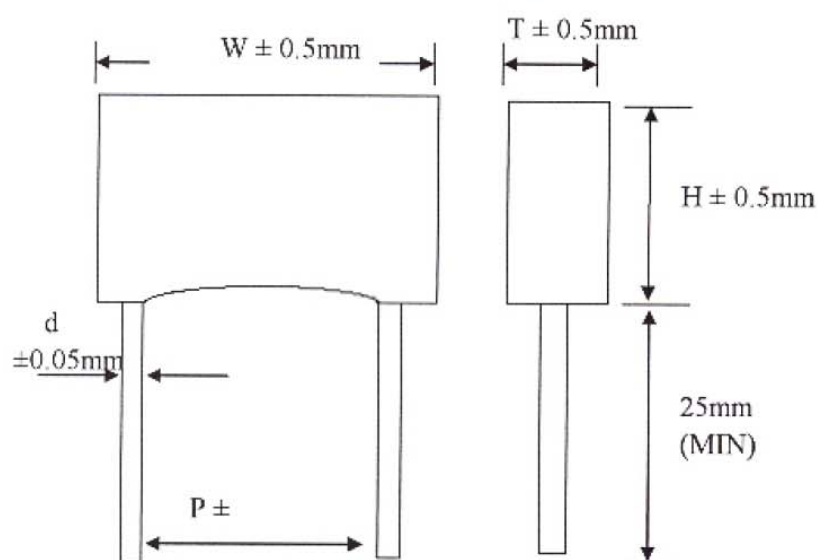
Aritec Electronics Co., Ltd.

90 Moo 4 Ladkrabang Ind. Estate, Ladkrabang, Bangkok 10520

Phone: 66-23261215-7, Fax: 66-23260727, Email: aritec@loxinfo.co.th

INTERFERENCE SUPPRESSION X2 CAPACITOR (MPX)

21. Case Size of Standard Products



CAP (PF)	RV SIZE	275VAC				
		Case	W	H	T	d
102~393 (P=10)		C2	13.0	11.0	5.0	0.6
473~104 (P=10)		C3	13.0	12.0	6.0	0.8
103~683 (P=15)		D1	18.0	11.0	5.0	0.8
823~104 (P=15)		D2	18.0	12.0	6.0	0.8
124~154 (P=15)		D3	18.0	13.5	7.5	0.8
224 (P=15)		D4	18.0	14.5	8.5	0.8
334 (P=15)		D5	18.0	15.5	9.5	0.8
474 (P=15)		D7	18.0	19.0	11.0	0.8
224 (P=22.5)		E2	26.5	16.5	7.0	0.8
334 (P=22.5)		E3	26.5	17.0	8.5	0.8
474 (P=22.5)		E4	26.5	19.0	10.0	0.8
684 (P=27.5)		F1	32.0	20.0	11.0	0.8
105 (P=27.5)		F2	32.0	22.0	13.0	0.8