

MPX/X2 Metallized Polypropylene Film Interference Suppression Capacitors (Class X2) Data Sheet

Feature

- Wide capacitance range from 0.001uF to 10.0uF.
- Operating Temperature: -40℃～110℃.
- Storage Temperature: 15℃～35℃.
- Withstanding over-voltage stressing.
- Excellent active and passive flame resistant abilities (UL94V-0).

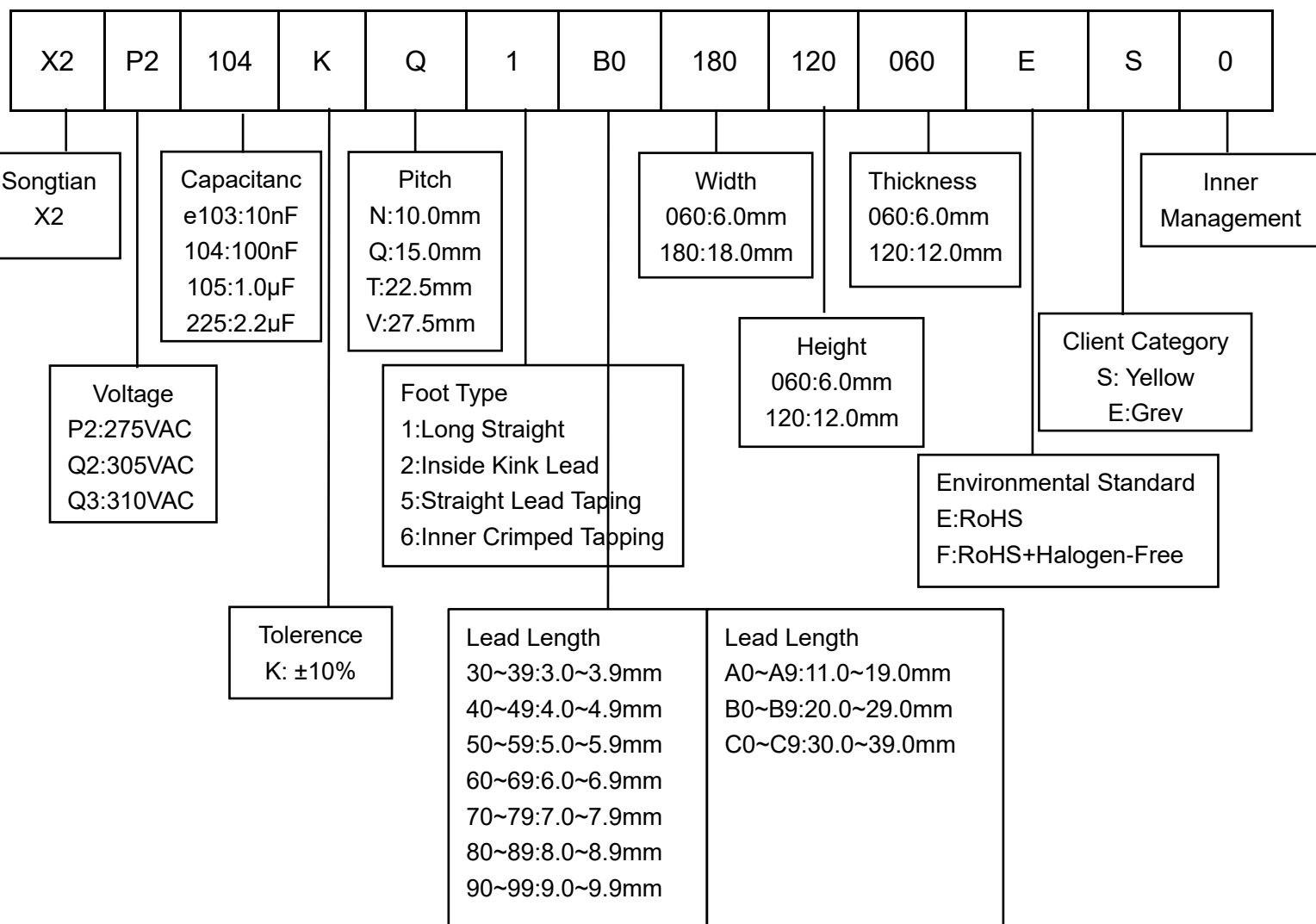
Applications

- Widely used in across-the-line, interference suppression circuit.ect.

Applicable Standard

Approval	Organization	Safety Standards	Certificate No.	Capacity Range(μ F)	Rated Voltage
USA Canada	UL/CUL	UL60384-14	E208107	0.001～10.0	275VAC 305VAC 310VAC 330VAC 350VAC
Germany	VDE	EN60384-14	40034679	0.001～10.0	
EU	ENEC	EN60384-14	40034679	0.001～10.0	
China	CQC	GB/T 6346.14-2023	CQC19001213200	0.001～10.0	
Korea	KTL	K60384	SU03031-12001C	0.1below	
			SU03031-12002C	0.1above～0.33	
			SU03031-12003D	0.33 above～1.0	
			SU03031-12004D	1.0 above～2.2	
			SU03031-23001	2.2above～4.7	
			SU03031-23002	4.7 above～10.0	

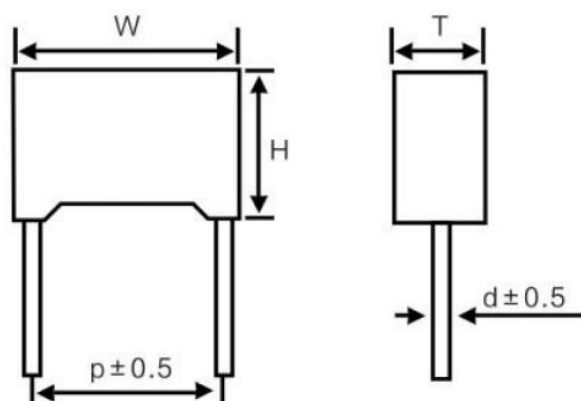
Part Number Code



Specifications

Climatic Category	40/110/56
Rated Voltage	275VAC、305VAC、310VAC、330VAC、350VAC
Dissipation Factor(tanδ)	≤0.1%
Withstand Voltage	Between terminals to case: 2U _R +1500VAC Minimum of 2000VAC
	Between terminals:4.3U _R (DC)/5S
Insulation Resistance (I.R.)	C _R ≤0.33μF, IR≥15000MΩ C _R >0.33μF, IR≥5000S Note: T[s]=I.R.[MΩ]*CN [μF] 20℃、100V、60S

Dimensions (mm) and Approval



Capacitance (uF)	Rated Voltage	Size (mm)				
		W±0.5	H±0.5	T±0.5	P±0.5	d±0.05
0.001	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.0012	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.0015	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.0018	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.002	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.0022	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.0025	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.0027	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.0033	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.0039	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.0047	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6

Capacitance (uF)	Rated Voltage	Size (mm)				
		W±0.5	H±0.5	T±0.5	P±0.5	d±0.05
0.0056	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.0068	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.0082	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.01	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.012	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.015	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.018	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.022	275VAC/305VAC/310VAC	10	9	4	7.5	0.6
	330VAC/350VAC	10	11	5	7.5	0.6
0.033	275VAC/305VAC/310VAC	10	11.5	6	7.5	0.6
	330VAC/350VAC	10	15	8	7.5	0.6
0.001	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.0012	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.0015	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.0018	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.0022	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.0033	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.0039	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6

Capacitance (uF)	Rated Voltage	Size (mm)				
		W±0.5	H±0.5	T±0.5	P±0.5	d±0.05
0.0047	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.0056	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.0068	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.0082	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.01	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.012	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.015	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.018	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.02	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.022	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.027	275VAC/305VAC/310VAC	13	9	4	10	0.6
	330VAC/350VAC	13	11	5	10	0.6
0.033	275VAC/305VAC/310VAC 330VAC/350VAC	13	11	5	10	0.6
0.039	275VAC/305VAC/310VAC	13	11	5	10	0.6
	330VAC/350VAC	13	12	6	10	0.6
0.047	275VAC/305VAC/310VAC	13	11	5	10	0.6
	330VAC/350VAC	13	12	6	10	0.6
0.056	275VAC/305VAC/310VAC	13	12	6	10	0.6
	330VAC/350VAC	13	13	7	10	0.6
0.068	275VAC/305VAC/310VAC	13	12	6	10	0.6
	330VAC/350VAC	13	13	7	10	0.6

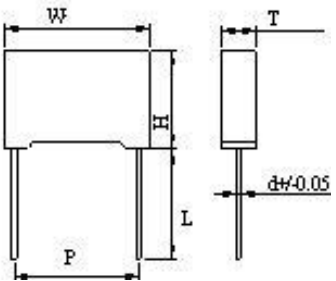
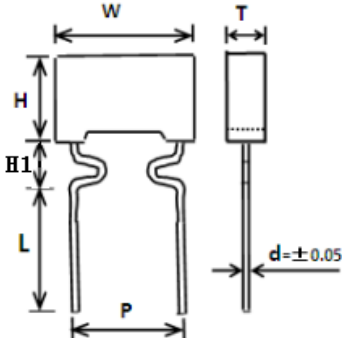
Capacitance (uF)	Rated Voltage	Size (mm)				
		W±0.5	H±0.5	T±0.5	P±0.5	d±0.05
0.082	275VAC/305VAC/310VAC	13	12	6	10	0.6
	330VAC/350VAC	13	13	7	10	0.6
0.1	275VAC/305VAC/310VAC	13	12	6	10	0.6
	330VAC/350VAC	13	13	7	10	0.6
0.12	275VAC/305VAC/310VAC	13	12	6	10	0.6
	330VAC/350VAC	13	13	7	10	0.6
0.15	275VAC/305VAC/310VAC	13	12	6	10	0.6
	330VAC/350VAC	13	15.5	8	10	0.6
0.15	275VAC/305VAC/310VAC	15	12.5	7	12.5	0.6
	330VAC/350VAC	15	15	9	12.5	0.6
0.18	275VAC/305VAC/310VAC	15	12.5	7	12.5	0.6
	330VAC/350VAC	15	15	9	12.5	0.6
0.22	275VAC/305VAC/310VAC	15	14	8.5	12.5	0.6
	330VAC/350VAC	15	15	9	12.5	0.6
0.01	275VAC/305VAC/310VAC	18	11	5	15	0.8
	330VAC/350VAC	18	12	6	15	0.8
0.012	275VAC/305VAC/310VAC	18	11	5	15	0.8
	330VAC/350VAC	18	12	6	15	0.8
0.015	275VAC/305VAC/310VAC	18	11	5	15	0.8
	330VAC/350VAC	18	12	6	15	0.8
0.018	275VAC/305VAC/310VAC	18	11	5	15	0.8
	330VAC/350VAC	18	12	6	15	0.8
0.022	275VAC/305VAC/310VAC	18	11	5	15	0.8
	330VAC/350VAC	18	12	6	15	0.8
0.033	275VAC/305VAC/310VAC	18	11	5	15	0.8
	330VAC/350VAC	18	12	6	15	0.8
0.047	275VAC/305VAC/310VAC	18	11	5	15	0.8
	330VAC/350VAC	18	12	6	15	0.8
0.056	275VAC/305VAC/310VAC	18	11	5	15	0.8
	330VAC/350VAC	18	12	6	15	0.8
0.068	275VAC/305VAC/310VAC	18	11	5	15	0.8
	330VAC/350VAC	18	12	6	15	0.8

Capacitance (uF)	Rated Voltage	Size (mm)				
		W±0.5	H±0.5	T±0.5	P±0.5	d±0.05
0.082	275VAC/305VAC/310VAC	18	12	6	15	0.8
	330VAC/350VAC	18	12.5	6.5	15	0.8
0.1	275VAC/305VAC/310VAC	18	12	6	15	0.8
	330VAC/350VAC	18	12.5	6.5	15	0.8
0.15	275VAC/305VAC/310VAC	18	12	6	15	0.8
	330VAC/350VAC	18	12.5	6.5	15	0.8
0.18	275VAC/305VAC/310VAC	18	12	6	15	0.8
	330VAC/350VAC	18	13.5	7.5	15	0.8
0.2	275VAC/305VAC/310VAC	18	12	6	15	0.8
	330VAC/350VAC	18	15	9	15	0.8
0.22	275VAC/305VAC/310VAC	18	12	6	15	0.8
	330VAC/350VAC	18	15	9	15	0.8
0.27	275VAC/305VAC/310VAC	18	13.5	7.5	15	0.8
	330VAC/350VAC	18	15	9	15	0.8
0.33	275VAC/305VAC/310VAC	18	14.5	8.5	15	0.8
	330VAC/350VAC	18	15	9	15	0.8
0.39	275VAC/305VAC/310VAC	18	16	10	15	0.8
	330VAC/350VAC	18	19	11	15	0.8
0.47	275VAC/305VAC/310VAC	18	16	10	15	0.8
	330VAC/350VAC	18	19	11	15	0.8
0.52	275VAC/305VAC/310VAC	18	16	10	15	0.8
	330VAC/350VAC	18	20	11	15	0.8
0.56	275VAC/305VAC/310VAC	18	16	10	15	0.8
	330VAC/350VAC	18	20	11	15	0.8
0.15	275VAC/305VAC/310VAC 330VAC/350VAC	26.5	16	7	22.5	0.8
0.18	275VAC/305VAC/310VAC 330VAC/350VAC	26.5	16	7	22.5	0.8
0.22	275VAC/305VAC/310VAC 330VAC/350VAC	26.5	16	7	22.5	0.8
0.27	275VAC/305VAC/310VAC 330VAC/350VAC	26.5	16	7	22.5	0.8
0.33	275VAC/305VAC/310VAC	26.5	16.5	7	22.5	0.8
	330VAC/350VAC	26.5	17	8	22.5	0.8

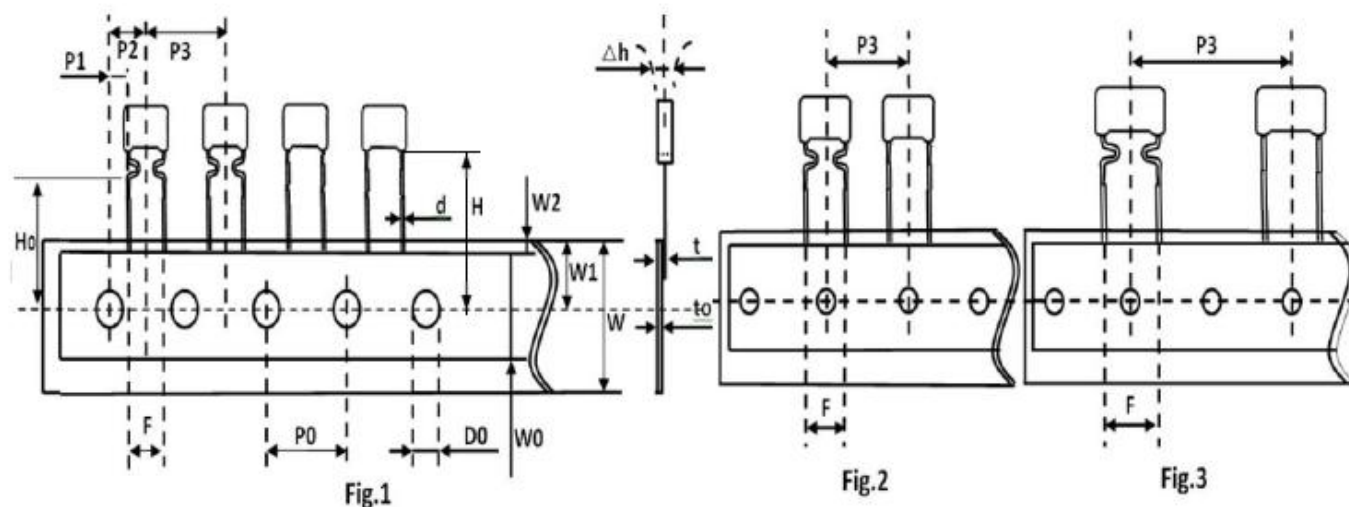
Capacitance (uF)	Rated Voltage	Size (mm)				
		W±0.5	H±0.5	T±0.5	P±0.5	d±0.05
0.39	275VAC/305VAC/310VAC 330VAC/350VAC	26.5	17	8.5	22.5	0.8
0.47	275VAC/305VAC/310VAC 330VAC/350VAC	26.5	19	10	22.5	0.8
0.52	275VAC/305VAC/310VAC	26.5	17	8.5	22.5	0.8
	330VAC/350VAC	26.5	18	9	22.5	0.8
0.56	275VAC/305VAC/310VAC	26.5	17	8.5	22.5	0.8
	330VAC/350VAC	26.5	18	9	22.5	0.8
0.68	275VAC/305VAC/310VAC	26.5	19	10	22.5	0.8
	330VAC/350VAC	26.5	20.5	11	22.5	0.8
0.82	275VAC/305VAC/310VAC 330VAC/350VAC	26.5	22	13	22.5	0.8
0.47	275VAC/305VAC/310VAC 330VAC/350VAC	31	20	11	27.5	0.8
0.52	275VAC/305VAC/310VAC 330VAC/350VAC	31	20	11	27.5	0.8
0.56	275VAC/305VAC/310VAC 330VAC/350VAC	31	20	11	27.5	0.8
0.68	275VAC/305VAC/310VAC 330VAC/350VAC	31	20	11	27.5	0.8
0.82	275VAC/305VAC/310VAC	31	21.5	12	27.5	0.8
	330VAC/350VAC	31	21	12	27.5	0.8
1	275VAC/305VAC/310VAC	31	21.5	12	27.5	0.8
	330VAC/350VAC	31	21	12	27.5	0.8
1.2	275VAC/305VAC/310VAC	31	22	13	27.5	0.8
	330VAC/350VAC	31	24	13	27.5	0.8
1.5	275VAC/305VAC/310VAC	31	22	13	27.5	0.8
	330VAC/350VAC	31	25	14	27.5	0.8
1.8	275VAC/305VAC/310VAC	31	22	13	27.5	0.8
	330VAC/350VAC	31	25.5	15	27.5	0.8
2	275VAC/305VAC/310VAC	31	22	13	27.5	0.8
	330VAC/350VAC	31	28	18	27.5	0.8
2.2	275VAC/305VAC/310VAC	31	25	14	27.5	0.8
	330VAC/350VAC	31	28	18	27.5	0.8
2.5	275VAC/305VAC/310VAC	32	25	14	27.5	0.8
	330VAC/350VAC	32	31	22	27.5	0.8

Capacitance (uF)	Rated Voltage	Size (mm)				
		W±0.5	H±0.5	T±0.5	P±0.5	d±0.05
2.7	275VAC/305VAC/310VAC	32	25	15	27.5	0.8
	330VAC/350VAC	32	31	22	27.5	0.8
3	275VAC/305VAC/310VAC	31	25	15	27.5	0.8
	330VAC/350VAC	31	37	22	27.5	0.8
3.3	275VAC/305VAC/310VAC	31	25	15	27.5	0.8
	330VAC/350VAC	31	37	22	27.5	0.8
3.5	275VAC/305VAC/310VAC	32	28	18	27.5	0.8
3.9	275VAC/305VAC/310VAC	32	37	22	27.5	0.8
2	275VAC/305VAC/310VAC 330VAC/350VAC	41	28	14	37.5	1.0
2.2	275VAC/305VAC/310VAC 330VAC/350VAC	41	28	14	37.5	1.0
2.5	275VAC/305VAC/310VAC	41.5	28	14	37.5	1.0
	330VAC/350VAC	41.5	30	17	37.5	1.0
2.7	275VAC/305VAC/310VAC	41.5	28	14	37.5	1.0
	330VAC/350VAC	41.5	30	17	37.5	1.0
3	275VAC/305VAC/310VAC	41.5	28	14	37.5	1.0
	330VAC/350VAC	41.5	30	17	37.5	1.0
3.3	275VAC/305VAC/310VAC	41.5	28	14	37.5	1.0
	330VAC/350VAC	41.5	34	20.5	37.5	1.0
3.5	330VAC/350VAC	41.5	34	20.5	37.5	1.0
3.9	330VAC/350VAC	41.5	35.5	22.5	37.5	1.0
4.7	275VAC/305VAC/310VAC 330VAC/350VAC	41.5	35.5	22.5	37.5	1.0
5.6	275VAC/305VAC/310VAC 330VAC/350VAC	42.5	41	27.5	37.5	1.0
6.8	275VAC/305VAC/310VAC 330VAC/350VAC	42.5	41	27.5	37.5	1.0
8.2	275VAC/305VAC/310VAC 330VAC/350VAC	42.5	45	30	37.5	1.0
10	275VAC/305VAC/310VAC 330VAC/350VAC	42.5	50	35	37.5	1.0

Lead Configuration

Lead Style	Drawing	Lead Length L (mm)	Coating Lead Length H1(mm)
Long Straight		$2.5 \leq L < 6.0: \pm 0.5$ $6.0 \leq L \leq 10: \pm 1.0$	/
Inner Crimped		$2.5 \leq L < 6.0: \pm 0.5$ $6.0 \leq L \leq 10: \pm 1.0$	Pitch $P > 10\text{mm}$: $H1 < 6.0\text{mm}$ Pitch $P \leq 10\text{mm}$: $H1 < 5.0\text{mm}$

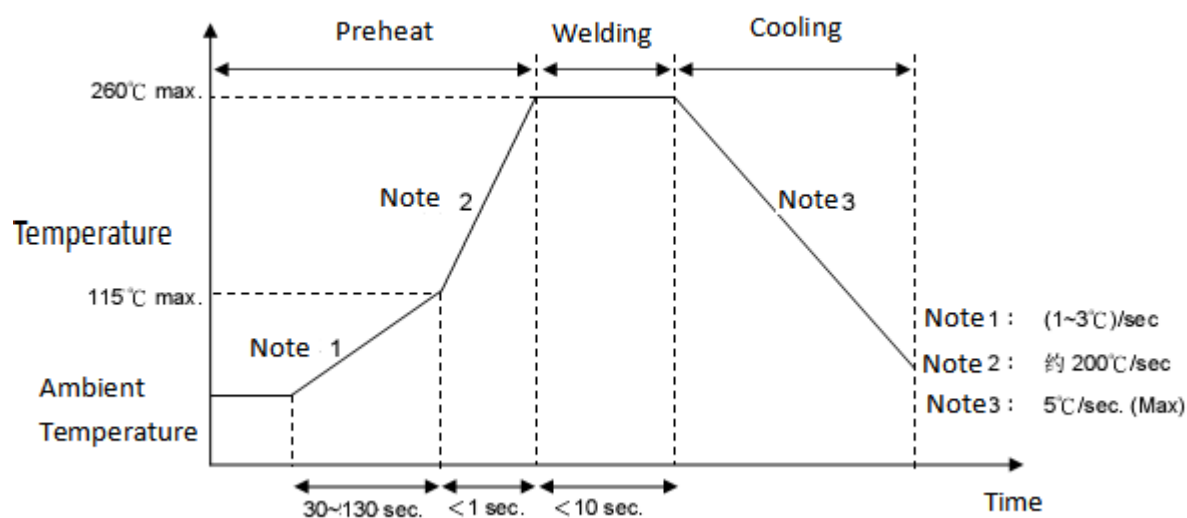
Taping And Dimensions (mm)



Symbol	Fig.1	Fig.2	Fig.2	Fig.3	Fig.3	Tolerance
	P=5.0	P=7.5	P=10	P=15	P=20/22.5	
P3	12.7	12.7	12.7	25.4	30.0	±1.0
P2	6.35	/	/	/	/	±1.3
P0	12.7	12.7	12.7	12.7	15.0	±0.3
P1	3.85	/	/	/	/	±0.7
F	5.0	7.5	10.0	15.0	20.0/22.5	±1.0
H	20.0	20.0	20.0	20.0	20.0	±1.0
H0	16.5	16.5	16.5	16.5	16.5	±0.5
Δ h	0	0	0	0	0	±2.0
W	18.0	18.0	18.0	18.0	18.0	+1.0/-0.5
W0	12.0	12.0	12.0	12.0	12.0	±1.0
W1	9.0	9.0	9.0	9.0	9.0	±0.5
W2	3.0	3.0	3.0	3.0	3.0	Max
D0	4.0	4.0	4.0	4.0	4.0	±0.3
d	0.5	0.6	0.6	0.8	0.8	±0.05
t	1.0	1.1	1.1	1.4	1.4	±0.2
t0	0.38	0.38	0.38	0.47	0.47	±0.04

Soldering Condition

Wave Soldering Graph



Note: Film capacitor is not suitable for reflow soldering, because it will cause thermal contraction and affect electrical performance.

Iron Soldering Condition

Item	Condition
Temperature of soldering copper bit	350°C (max.)
Soldering duration	3sec (max.)
Space between soldering position and coating layer	2mm (min.)