

# SMW Series Unencapsulated Winding, Size 2220 – 2824, 50 – 400 VDC

## Overview

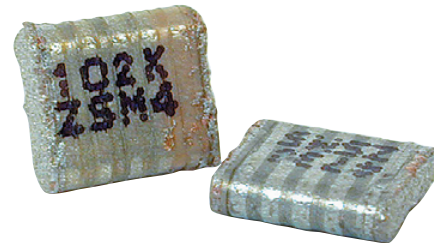
Polyphenylene sulphide (PPS) film capacitor for surface mounting.

## Applications

Typical applications include timing, filtering and use as a memory capacitor. The SMW Series is designed for high stability, accuracy and temperature.

## Benefits

- Rated voltage: 50 – 400 VDC
- Rated voltage: 30 – 200 VAC
- Capacitance range: 0.001 – 0.56  $\mu$ F
- EIA size: 2220 – 2824
- Capacitance tolerance:  $\pm 2\%$ ,  $\pm 2.5\%$ ,  $\pm 5\%$ ,  $\pm 10\%$
- Climatic category: 55/125/56
- RoHS Compliant and lead-free terminations
- Operating temperature range of  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$



## Legacy Part Number System

SMW	5.7	102	K	50	J91	TR12
Series	Chip Length (mm)	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Size Code	Packaging Code
Metallized PPS	5.7 7.3	First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros.	G = $\pm 2\%$ H = $\pm 2.5\%$ J = $\pm 5\%$ K = $\pm 10\%$	50 100 250 400	See Dimension Table	See Ordering Options Table

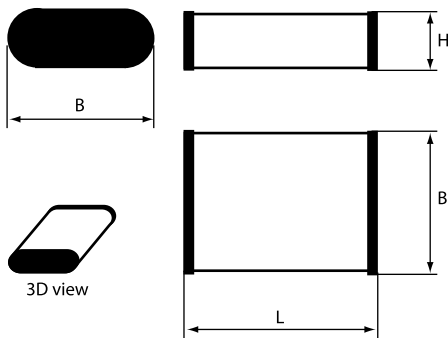
## New KEMET Part Number System

F	126	P	H	102	K	050	V
Capacitor Class	Series	Chip Size	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Packaging Code
F = Film	Metallized PPS	P = 2220 S = 2824	See Dimension Table	First two digits indicate the two most significant digits of the capacitance value in picofarads. The third digit is the number of following zeros.	G = $\pm 2\%$ R = $\pm 2.5\%$ J = $\pm 5\%$ K = $\pm 10\%$	050 = 50 100 = 100 250 = 250 400 = 400	See Ordering Options Table

## Ordering Options Table

Packaging Type	KEMET Packaging Code	Legacy Packaging Code
<b>Standard Lead and Packaging Options</b>		
Tape & Reel (Standard Reel)	V	TR12
Bulk (Bag)	A	BULK

## Dimensions – Millimeters



KEMET Size Code	Legacy Size Code	Chip Size (EIA)	B		H		L	
			Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
PH	J91	2220	5.0	+/-0.4	2.0	Maximum	5.7	+/-0.4
PP	J93	2220	5.0	+/-0.4	3.0	Maximum	5.7	+/-0.4
PU	J95	2220	5.0	+/-0.4	4.0	Maximum	5.7	+/-0.4
SE	K91	2824	6.0	+/-0.4	2.0	Maximum	7.3	+/-0.4
SH	K93	2824	6.0	+/-0.4	2.7	Maximum	7.3	+/-0.4
SM	K95	2824	6.0	+/-0.4	3.2	Maximum	7.3	+/-0.4
SS	K97	2824	6.0	+/-0.4	4.2	Maximum	7.3	+/-0.4

## Environmental Compliance

All KEMET surface mount capacitors are RoHS Compliant.

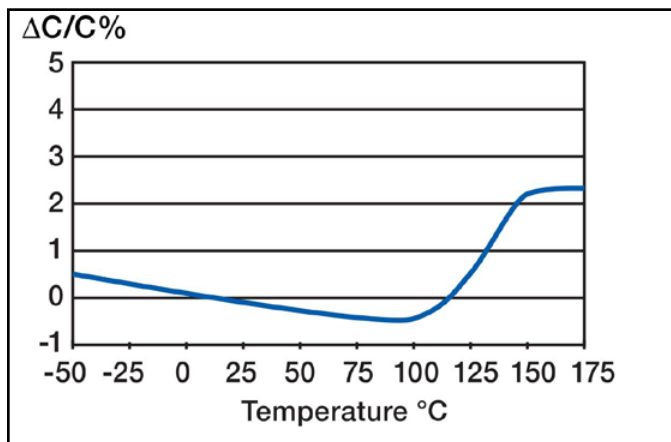


RoHS Compliant

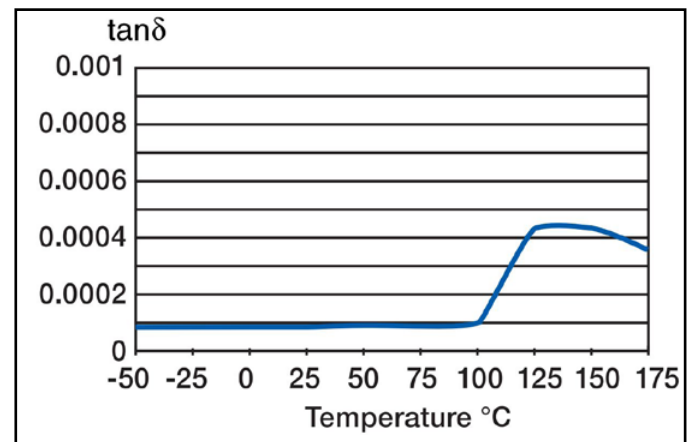
## Performance Characteristics

Rated Voltage (VDC)	50	100	250	400
Rated Voltage (VAC)	30	63	160	200
Capacitance Range (μF)	0.001 – 0.56	0.001 – 0.18	0.001 – 0.068	0.001 – 0.022
Chip Size (EIA)	2220 – 2824			
Capacitance Tolerance	±2%, ±2.5%, ±5%, ±10%			
Category Temperature Range	-55°C to +125°C			
Rated Temperature	+100°C			
Voltage Derating	The rated voltage should be decreased with 1.25%/°C from +100°C to +125°C and 1.5%/°C from +125°C to 175°C			
Climatic Category	55/125/56			
Test Voltage	1.6 x V <sub>R</sub> , 60 seconds			
Insulation Resistance	Measured at +20°C According to IEC 60384–20			
	Minimum Value Between Terminals			
		C ≤ 0.56 μF		
	V <sub>R</sub> ≤ 100	15,000 MΩ		
	V <sub>R</sub> > 100	30,000 MΩ		
Dissipation Factor	Maximum Values at +23°C			
		C ≤ 0.1 μF		0.1 < C ≤ 0.56 μF
	1 kHz	0.15%		0.15%
	10 kHz	0.25%		0.25%
	100 kHz	0.50%		0.60%
Pulse Rise Time	The capacitors can withstand an unlimited number of pulses with a dV/dt according to Table 1. For voltages (V) lower than the rated voltage (V <sub>R</sub> ), the specified dV/dt can be multiplied by V <sub>R</sub> /V.			

### Capacitance vs. Temperature



### Dissipation Factor vs. Temperature



**Table 1 – Ratings & Part Number Reference**

VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
50	30	0.0010	PH/J91	5.0	2.0	5.7	2220	20	F126PH102(1)050(2)	SMW5.7102(1)50J91(2)
50	30	0.0012	PH/J91	5.0	2.0	5.7	2220	20	F126PH122(1)050(2)	SMW5.7122(1)50J91(2)
50	30	0.0015	PH/J91	5.0	2.0	5.7	2220	20	F126PH152(1)050(2)	SMW5.7152(1)50J91(2)
50	30	0.0018	PH/J91	5.0	2.0	5.7	2220	20	F126PH182(1)050(2)	SMW5.7182(1)50J91(2)
50	30	0.0022	PH/J91	5.0	2.0	5.7	2220	20	F126PH222(1)050(2)	SMW5.7222(1)50J91(2)
50	30	0.0027	PH/J91	5.0	2.0	5.7	2220	20	F126PH272(1)050(2)	SMW5.7272(1)50J91(2)
50	30	0.0033	PH/J91	5.0	2.0	5.7	2220	20	F126PH332(1)050(2)	SMW5.7332(1)50J91(2)
50	30	0.0039	PH/J91	5.0	2.0	5.7	2220	20	F126PH392(1)050(2)	SMW5.7392(1)50J91(2)
50	30	0.0047	PH/J91	5.0	2.0	5.7	2220	20	F126PH472(1)050(2)	SMW5.7472(1)50J91(2)
50	30	0.0056	PH/J91	5.0	2.0	5.7	2220	20	F126PH562(1)050(2)	SMW5.7562(1)50J91(2)
50	30	0.0068	PH/J91	5.0	2.0	5.7	2220	20	F126PH682(1)050(2)	SMW5.7682(1)50J91(2)
50	30	0.0082	PH/J91	5.0	2.0	5.7	2220	20	F126PH822(1)050(2)	SMW5.7822(1)50J91(2)
50	30	0.010	PH/J91	5.0	2.0	5.7	2220	20	F126PH103(1)050(2)	SMW5.7103(1)50J91(2)
50	30	0.012	PH/J91	5.0	2.0	5.7	2220	20	F126PH123(1)050(2)	SMW5.7123(1)50J91(2)
50	30	0.015	PH/J91	5.0	2.0	5.7	2220	20	F126PH153(1)050(2)	SMW5.7153(1)50J91(2)
50	30	0.018	PH/J91	5.0	2.0	5.7	2220	15	F126PH183(1)050(2)	SMW5.7183(1)50J91(2)
50	30	0.022	PH/J91	5.0	2.0	5.7	2220	15	F126PH223(1)050(2)	SMW5.7223(1)50J91(2)
50	30	0.027	PH/J91	5.0	2.0	5.7	2220	15	F126PH273(1)050(2)	SMW5.7273(1)50J91(2)
50	30	0.033	PH/J91	5.0	2.0	5.7	2220	15	F126PH333(1)050(2)	SMW5.7333(1)50J91(2)
50	30	0.039	PH/J91	5.0	2.0	5.7	2220	15	F126PH393(1)050(2)	SMW5.7393(1)50J91(2)
50	30	0.047	PH/J91	5.0	2.0	5.7	2220	15	F126PH473(1)050(2)	SMW5.7473(1)50J91(2)
50	30	0.056	PH/J91	5.0	2.0	5.7	2220	15	F126PH563(1)050(2)	SMW5.7563(1)50J91(2)
50	30	0.068	PH/J91	5.0	2.0	5.7	2220	15	F126PH683(1)050(2)	SMW5.7683(1)50J91(2)
50	30	0.082	PH/J91	5.0	2.0	5.7	2220	10	F126PH823(1)050(2)	SMW5.7823(1)50J91(2)
50	30	0.10	PH/J91	5.0	2.0	5.7	2220	10	F126PH104(1)050(2)	SMW5.7104(1)50J91(2)
50	30	0.12	PH/J91	5.0	2.0	5.7	2220	10	F126PH124(1)050(2)	SMW5.7124(1)50J91(2)
50	30	0.15	PH/J91	5.0	2.0	5.7	2220	10	F126PH154(1)050(2)	SMW5.7154(1)50J91(2)
50	30	0.18	PP/J93	5.0	3.0	5.7	2220	10	F126PP184(1)050(2)	SMW5.7184(1)50J93(2)
50	30	0.22	PP/J93	5.0	3.0	5.7	2220	10	F126PP224(1)050(2)	SMW5.7224(1)50J93(2)
50	30	0.27	PP/J93	5.0	3.0	5.7	2220	10	F126PP274(1)050(2)	SMW5.7274(1)50J93(2)
50	30	0.33	PU/J95	5.0	4.0	5.7	2220	10	F126PU334(1)050(2)	SMW5.7334(1)50J95(2)
50	30	0.0022	SE/K91	6.0	2.0	7.3	2824	20	F126SE222(1)050(2)	SMW7.3222(1)50K91(2)
50	30	0.0027	SE/K91	6.0	2.0	7.3	2824	20	F126SE272(1)050(2)	SMW7.3272(1)50K91(2)
50	30	0.0033	SE/K91	6.0	2.0	7.3	2824	20	F126SE332(1)050(2)	SMW7.3332(1)50K91(2)
50	30	0.0039	SE/K91	6.0	2.0	7.3	2824	20	F126SE392(1)050(2)	SMW7.3392(1)50K91(2)
50	30	0.0047	SE/K91	6.0	2.0	7.3	2824	20	F126SE472(1)050(2)	SMW7.3472(1)50K91(2)
50	30	0.0056	SE/K91	6.0	2.0	7.3	2824	20	F126SE562(1)050(2)	SMW7.3562(1)50K91(2)
50	30	0.0068	SE/K91	6.0	2.0	7.3	2824	20	F126SE682(1)050(2)	SMW7.3682(1)50K91(2)
50	30	0.0082	SE/K91	6.0	2.0	7.3	2824	20	F126SE822(1)050(2)	SMW7.3822(1)50K91(2)
50	30	0.010	SE/K91	6.0	2.0	7.3	2824	20	F126SE103(1)050(2)	SMW7.3103(1)50K91(2)
50	30	0.012	SE/K91	6.0	2.0	7.3	2824	20	F126SE123(1)050(2)	SMW7.3123(1)50K91(2)
50	30	0.015	SE/K91	6.0	2.0	7.3	2824	20	F126SE153(1)050(2)	SMW7.3153(1)50K91(2)
50	30	0.018	SE/K91	6.0	2.0	7.3	2824	20	F126SE183(1)050(2)	SMW7.3183(1)50K91(2)
50	30	0.022	SE/K91	6.0	2.0	7.3	2824	20	F126SE223(1)050(2)	SMW7.3223(1)50K91(2)
50	30	0.027	SE/K91	6.0	2.0	7.3	2824	15	F126SE273(1)050(2)	SMW7.3273(1)50K91(2)
50	30	0.033	SE/K91	6.0	2.0	7.3	2824	15	F126SE333(1)050(2)	SMW7.3333(1)50K91(2)
50	30	0.039	SE/K91	6.0	2.0	7.3	2824	15	F126SE393(1)050(2)	SMW7.3393(1)50K91(2)
50	30	0.047	SE/K91	6.0	2.0	7.3	2824	15	F126SE473(1)050(2)	SMW7.3473(1)50K91(2)
50	30	0.056	SE/K91	6.0	2.0	7.3	2824	15	F126SE563(1)050(2)	SMW7.3563(1)50K91(2)
50	30	0.068	SE/K91	6.0	2.0	7.3	2824	15	F126SE683(1)050(2)	SMW7.3683(1)50K91(2)
50	30	0.082	SE/K91	6.0	2.0	7.3	2824	8	F126SE823(1)050(2)	SMW7.3823(1)50K91(2)
50	30	0.10	SE/K91	6.0	2.0	7.3	2824	8	F126SE104(1)050(2)	SMW7.3104(1)50K91(2)
50	30	0.12	SE/K91	6.0	2.0	7.3	2824	8	F126SE124(1)050(2)	SMW7.3124(1)50K91(2)
50	30	0.15	SE/K91	6.0	2.0	7.3	2824	8	F126SE154(1)050(2)	SMW7.3154(1)50K91(2)
50	30	0.18	SE/K91	6.0	2.0	7.3	2824	8	F126SE184(1)050(2)	SMW7.3184(1)50K91(2)
50	30	0.22	SE/K91	6.0	2.0	7.3	2824	8	F126SE224(1)050(2)	SMW7.3224(1)50K91(2)
50	30	0.27	SE/K91	6.0	2.0	7.3	2824	8	F126SE274(1)050(2)	SMW7.3274(1)50K91(2)
50	30	0.33	SH/K93	6.0	2.7	7.3	2824	8	F126SH334(1)050(2)	SMW7.3334(1)50K93(2)
50	30	0.39	SM/K95	6.0	3.2	7.3	2824	8	F126SM394(1)050(2)	SMW7.3394(1)50K95(2)
VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	B (mm)	H (mm)	L (mm)	Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number

(1) G = ±2%, R = ±2.5% (Legacy code = H), J = ±5%, K = ±10%.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

**Table 1 – Ratings & Part Number Reference cont'd**

VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
50	30	0.47	SM/K95	6.0	3.2	7.3	2824	8	F126SM474(1)050(2)	SMW7.3474(1)50K95(2)
50	30	0.56	SS/K97	6.0	4.2	7.3	2824	8	F126SS564(1)050(2)	SMW7.3564(1)50K97(2)
100	63	0.0010	PH/J91	5.0	2.0	5.7	2220	20	F126PH102(1)100(2)	SMW5.7102(1)100J91(2)
100	63	0.0012	PH/J91	5.0	2.0	5.7	2220	20	F126PH122(1)100(2)	SMW5.7122(1)100J91(2)
100	63	0.0015	PH/J91	5.0	2.0	5.7	2220	20	F126PH152(1)100(2)	SMW5.7152(1)100J91(2)
100	63	0.0018	PH/J91	5.0	2.0	5.7	2220	20	F126PH182(1)100(2)	SMW5.7182(1)100J91(2)
100	63	0.0022	PH/J91	5.0	2.0	5.7	2220	20	F126PH222(1)100(2)	SMW5.7222(1)100J91(2)
100	63	0.0027	PH/J91	5.0	2.0	5.7	2220	20	F126PH272(1)100(2)	SMW5.7272(1)100J91(2)
100	63	0.0033	PH/J91	5.0	2.0	5.7	2220	20	F126PH332(1)100(2)	SMW5.7332(1)100J91(2)
100	63	0.0039	PH/J91	5.0	2.0	5.7	2220	20	F126PH392(1)100(2)	SMW5.7392(1)100J91(2)
100	63	0.0047	PH/J91	5.0	2.0	5.7	2220	20	F126PH472(1)100(2)	SMW5.7472(1)100J91(2)
100	63	0.0056	PH/J91	5.0	2.0	5.7	2220	20	F126PH562(1)100(2)	SMW5.7562(1)100J91(2)
100	63	0.0068	PH/J91	5.0	2.0	5.7	2220	20	F126PH682(1)100(2)	SMW5.7682(1)100J91(2)
100	63	0.0082	PH/J91	5.0	2.0	5.7	2220	20	F126PH822(1)100(2)	SMW5.7822(1)100J91(2)
100	63	0.010	PH/J91	5.0	2.0	5.7	2220	20	F126PH103(1)100(2)	SMW5.7103(1)100J91(2)
100	63	0.012	PH/J91	5.0	2.0	5.7	2220	20	F126PH123(1)100(2)	SMW5.7123(1)100J91(2)
100	63	0.015	PH/J91	5.0	2.0	5.7	2220	20	F126PH153(1)100(2)	SMW5.7153(1)100J91(2)
100	63	0.018	PH/J91	5.0	2.0	5.7	2220	15	F126PH183(1)100(2)	SMW5.7183(1)100J91(2)
100	63	0.022	PH/J91	5.0	2.0	5.7	2220	15	F126PH223(1)100(2)	SMW5.7223(1)100J91(2)
100	63	0.027	PH/J91	5.0	2.0	5.7	2220	15	F126PH273(1)100(2)	SMW5.7273(1)100J91(2)
100	63	0.033	PH/J91	5.0	2.0	5.7	2220	15	F126PH333(1)100(2)	SMW5.7333(1)100J91(2)
100	63	0.039	PH/J91	5.0	2.0	5.7	2220	15	F126PH393(1)100(2)	SMW5.7393(1)100J91(2)
100	63	0.047	PH/J91	5.0	2.0	5.7	2220	15	F126PH473(1)100(2)	SMW5.7473(1)100J91(2)
100	63	0.056	PH/J91	5.0	2.0	5.7	2220	15	F126PH563(1)100(2)	SMW5.7563(1)100J91(2)
100	63	0.068	PH/J91	5.0	2.0	5.7	2220	15	F126PH683(1)100(2)	SMW5.7683(1)100J91(2)
100	63	0.082	PP/J93	5.0	3.0	5.7	2220	15	F126PP823(1)100(2)	SMW5.7823(1)100J93(2)
100	63	0.10	PP/J93	5.0	3.0	5.7	2220	15	F126PP104(1)100(2)	SMW5.7104(1)100J93(2)
100	63	0.12	PU/J95	5.0	4.0	5.7	2220	15	F126PU124(1)100(2)	SMW5.7124(1)100J95(2)
100	63	0.15	PU/J95	5.0	4.0	5.7	2220	15	F126PU154(1)100(2)	SMW5.7154(1)100J95(2)
100	63	0.0022	SE/K91	6.0	2.0	7.3	2824	20	F126SE222(1)100(2)	SMW7.3222(1)100K91(2)
100	63	0.0027	SE/K91	6.0	2.0	7.3	2824	20	F126SE272(1)100(2)	SMW7.3272(1)100K91(2)
100	63	0.0033	SE/K91	6.0	2.0	7.3	2824	20	F126SE332(1)100(2)	SMW7.3332(1)100K91(2)
100	63	0.0039	SE/K91	6.0	2.0	7.3	2824	20	F126SE392(1)100(2)	SMW7.3392(1)100K91(2)
100	63	0.0047	SE/K91	6.0	2.0	7.3	2824	20	F126SE472(1)100(2)	SMW7.3472(1)100K91(2)
100	63	0.0056	SE/K91	6.0	2.0	7.3	2824	20	F126SE562(1)100(2)	SMW7.3562(1)100K91(2)
100	63	0.0068	SE/K91	6.0	2.0	7.3	2824	20	F126SE682(1)100(2)	SMW7.3682(1)100K91(2)
100	63	0.0082	SE/K91	6.0	2.0	7.3	2824	20	F126SE822(1)100(2)	SMW7.3822(1)100K91(2)
100	63	0.010	SE/K91	6.0	2.0	7.3	2824	20	F126SE103(1)100(2)	SMW7.3103(1)100K91(2)
100	63	0.012	SE/K91	6.0	2.0	7.3	2824	20	F126SE123(1)100(2)	SMW7.3123(1)100K91(2)
100	63	0.015	SE/K91	6.0	2.0	7.3	2824	20	F126SE153(1)100(2)	SMW7.3153(1)100K91(2)
100	63	0.018	SE/K91	6.0	2.0	7.3	2824	20	F126SE183(1)100(2)	SMW7.3183(1)100K91(2)
100	63	0.022	SE/K91	6.0	2.0	7.3	2824	20	F126SE223(1)100(2)	SMW7.3223(1)100K91(2)
100	63	0.027	SE/K91	6.0	2.0	7.3	2824	15	F126SE273(1)100(2)	SMW7.3273(1)100K91(2)
100	63	0.033	SE/K91	6.0	2.0	7.3	2824	15	F126SE333(1)100(2)	SMW7.3333(1)100K91(2)
100	63	0.039	SE/K91	6.0	2.0	7.3	2824	15	F126SE393(1)100(2)	SMW7.3393(1)100K91(2)
100	63	0.047	SE/K91	6.0	2.0	7.3	2824	15	F126SE473(1)100(2)	SMW7.3473(1)100K91(2)
100	63	0.056	SE/K91	6.0	2.0	7.3	2824	15	F126SE563(1)100(2)	SMW7.3563(1)100K91(2)
100	63	0.068	SE/K91	6.0	2.0	7.3	2824	15	F126SE683(1)100(2)	SMW7.3683(1)100K91(2)
100	63	0.082	SE/K91	6.0	2.0	7.3	2824	15	F126SE823(1)100(2)	SMW7.3823(1)100K91(2)
100	63	0.10	SH/K93	6.0	2.7	7.3	2824	15	F126SH104(1)100(2)	SMW7.3104(1)100K93(2)
100	63	0.12	SH/K93	6.0	2.7	7.3	2824	15	F126SH124(1)100(2)	SMW7.3124(1)100K93(2)
100	63	0.15	SM/K95	6.0	3.2	7.3	2824	15	F126SM154(1)100(2)	SMW7.3154(1)100K95(2)
100	63	0.18	SS/K97	6.0	4.2	7.3	2824	15	F126SS184(1)100(2)	SMW7.3184(1)100K97(2)
250	160	0.0010	PH/J91	5.0	2.0	5.7	2220	20	F126PH102(1)250(2)	SMW5.7102(1)250J91(2)
250	160	0.0012	PH/J91	5.0	2.0	5.7	2220	20	F126PH122(1)250(2)	SMW5.7122(1)250J91(2)
250	160	0.0015	PH/J91	5.0	2.0	5.7	2220	20	F126PH152(1)250(2)	SMW5.7152(1)250J91(2)
250	160	0.0018	PH/J91	5.0	2.0	5.7	2220	20	F126PH182(1)250(2)	SMW5.7182(1)250J91(2)
250	160	0.0022	PH/J91	5.0	2.0	5.7	2220	20	F126PH222(1)250(2)	SMW5.7222(1)250J91(2)
250	160	0.0027	PH/J91	5.0	2.0	5.7	2220	20	F126PH272(1)250(2)	SMW5.7272(1)250J91(2)

(1) G = ±2%, R = ±2.5% (Legacy code = H), J = ±5%, K = ±10%.

(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

**Table 1 – Ratings & Part Number Reference cont'd**

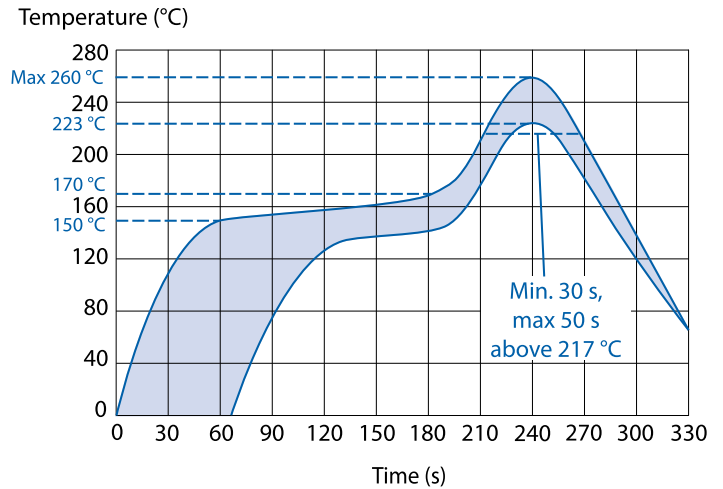
VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	Dimensions in mm			Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number
				B	H	L				
250	160	0.0033	PH/J91	5.0	2.0	5.7	2220	20	F126PH332(1)250(2)	SMW5.7332(1)250J91(2)
250	160	0.0039	PH/J91	5.0	2.0	5.7	2220	20	F126PH392(1)250(2)	SMW5.7392(1)250J91(2)
250	160	0.0047	PH/J91	5.0	2.0	5.7	2220	20	F126PH472(1)250(2)	SMW5.7472(1)250J91(2)
250	160	0.0056	PH/J91	5.0	2.0	5.7	2220	20	F126PH562(1)250(2)	SMW5.7562(1)250J91(2)
250	160	0.0068	PH/J91	5.0	2.0	5.7	2220	20	F126PH682(1)250(2)	SMW5.7682(1)250J91(2)
250	160	0.0082	PH/J91	5.0	2.0	5.7	2220	20	F126PH822(1)250(2)	SMW5.7822(1)250J91(2)
250	160	0.010	PH/J91	5.0	2.0	5.7	2220	20	F126PH103(1)250(2)	SMW5.7103(1)250J91(2)
250	160	0.012	PH/J91	5.0	2.0	5.7	2220	20	F126PH123(1)250(2)	SMW5.7123(1)250J91(2)
250	160	0.015	PH/J91	5.0	2.0	5.7	2220	20	F126PH153(1)250(2)	SMW5.7153(1)250J91(2)
250	160	0.018	PP/J93	5.0	3.0	5.7	2220	20	F126PP183(1)250(2)	SMW5.7183(1)250J93(2)
250	160	0.022	PP/J93	5.0	3.0	5.7	2220	20	F126PP223(1)250(2)	SMW5.7223(1)250J93(2)
250	160	0.027	PP/J93	5.0	3.0	5.7	2220	20	F126PP273(1)250(2)	SMW5.7273(1)250J93(2)
250	160	0.033	PU/J95	5.0	4.0	5.7	2220	20	F126PU333(1)250(2)	SMW5.7333(1)250J95(2)
250	160	0.0022	SE/K91	6.0	2.0	7.3	2824	20	F126SE222(1)250(2)	SMW7.3222(1)250K91(2)
250	160	0.0027	SE/K91	6.0	2.0	7.3	2824	20	F126SE272(1)250(2)	SMW7.3272(1)250K91(2)
250	160	0.0033	SE/K91	6.0	2.0	7.3	2824	20	F126SE332(1)250(2)	SMW7.3332(1)250K91(2)
250	160	0.0039	SE/K91	6.0	2.0	7.3	2824	20	F126SE392(1)250(2)	SMW7.3392(1)250K91(2)
250	160	0.0047	SE/K91	6.0	2.0	7.3	2824	20	F126SE472(1)250(2)	SMW7.3472(1)250K91(2)
250	160	0.0056	SE/K91	6.0	2.0	7.3	2824	20	F126SE562(1)250(2)	SMW7.3562(1)250K91(2)
250	160	0.0068	SE/K91	6.0	2.0	7.3	2824	20	F126SE682(1)250(2)	SMW7.3682(1)250K91(2)
250	160	0.0082	SE/K91	6.0	2.0	7.3	2824	20	F126SE822(1)250(2)	SMW7.3822(1)250K91(2)
250	160	0.010	SE/K91	6.0	2.0	7.3	2824	20	F126SE103(1)250(2)	SMW7.3103(1)250K91(2)
250	160	0.012	SE/K91	6.0	2.0	7.3	2824	20	F126SE123(1)250(2)	SMW7.3123(1)250K91(2)
250	160	0.015	SE/K91	6.0	2.0	7.3	2824	20	F126SE153(1)250(2)	SMW7.3153(1)250K91(2)
250	160	0.018	SE/K91	6.0	2.0	7.3	2824	20	F126SE183(1)250(2)	SMW7.3183(1)250K91(2)
250	160	0.022	SE/K91	6.0	2.0	7.3	2824	20	F126SE223(1)250(2)	SMW7.3223(1)250K91(2)
250	160	0.027	SE/K91	6.0	2.0	7.3	2824	15	F126SE273(1)250(2)	SMW7.3273(1)250K91(2)
250	160	0.033	SH/K93	6.0	2.7	7.3	2824	15	F126SH333(1)250(2)	SMW7.3333(1)250K93(2)
250	160	0.039	SH/K93	6.0	2.7	7.3	2824	15	F126SH393(1)250(2)	SMW7.3393(1)250K93(2)
250	160	0.047	SM/K95	6.0	3.2	7.3	2824	15	F126SM473(1)250(2)	SMW7.3473(1)250K95(2)
250	160	0.056	SS/K97	6.0	4.2	7.3	2824	15	F126SS563(1)250(2)	SMW7.3563(1)250K97(2)
250	160	0.068	SS/K97	6.0	4.2	7.3	2824	15	F126SS683(1)250(2)	SMW7.3683(1)250K97(2)
400	200	0.0010	PH/J91	5.0	2.0	5.7	2220	20	F126PH102(1)400(2)	SMW5.7102(1)400J91(2)
400	200	0.0012	PH/J91	5.0	2.0	5.7	2220	20	F126PH122(1)400(2)	SMW5.7122(1)400J91(2)
400	200	0.0015	PH/J91	5.0	2.0	5.7	2220	20	F126PH152(1)400(2)	SMW5.7152(1)400J91(2)
400	200	0.0018	PH/J91	5.0	2.0	5.7	2220	20	F126PH182(1)400(2)	SMW5.7182(1)400J91(2)
400	200	0.0022	PH/J91	5.0	2.0	5.7	2220	20	F126PH222(1)400(2)	SMW5.7222(1)400J91(2)
400	200	0.0027	PH/J91	5.0	2.0	5.7	2220	20	F126PH272(1)400(2)	SMW5.7272(1)400J91(2)
400	200	0.0033	PH/J91	5.0	2.0	5.7	2220	20	F126PH332(1)400(2)	SMW5.7332(1)400J91(2)
400	200	0.0039	PH/J91	5.0	2.0	5.7	2220	20	F126PH392(1)400(2)	SMW5.7392(1)400J91(2)
400	200	0.0047	PH/J91	5.0	2.0	5.7	2220	20	F126PH472(1)400(2)	SMW5.7472(1)400J91(2)
400	200	0.0056	PP/J93	5.0	3.0	5.7	2220	20	F126PP562(1)400(2)	SMW5.7562(1)400J93(2)
400	200	0.0068	PP/J93	5.0	3.0	5.7	2220	20	F126PP682(1)400(2)	SMW5.7682(1)400J93(2)
400	200	0.0082	PP/J93	5.0	3.0	5.7	2220	20	F126PP822(1)400(2)	SMW5.7822(1)400J93(2)
400	200	0.010	PP/J93	5.0	3.0	5.7	2220	20	F126PP103(1)400(2)	SMW5.7103(1)400J93(2)
400	200	0.012	PU/J95	5.0	4.0	5.7	2220	20	F126PU123(1)400(2)	SMW5.7123(1)400J95(2)
400	200	0.015	PU/J95	5.0	4.0	5.7	2220	20	F126PU153(1)400(2)	SMW5.7153(1)400J95(2)
400	200	0.0022	SE/K91	6.0	2.0	7.3	2824	20	F126SE222(1)400(2)	SMW7.3222(1)400K91(2)
400	200	0.0027	SE/K91	6.0	2.0	7.3	2824	20	F126SE272(1)400(2)	SMW7.3272(1)400K91(2)
400	200	0.0033	SE/K91	6.0	2.0	7.3	2824	20	F126SE332(1)400(2)	SMW7.3332(1)400K91(2)
400	200	0.0039	SE/K91	6.0	2.0	7.3	2824	20	F126SE392(1)400(2)	SMW7.3392(1)400K91(2)
400	200	0.0047	SE/K91	6.0	2.0	7.3	2824	20	F126SE472(1)400(2)	SMW7.3472(1)400K91(2)
400	200	0.0056	SE/K91	6.0	2.0	7.3	2824	20	F126SE562(1)400(2)	SMW7.3562(1)400K91(2)
400	200	0.0068	SE/K91	6.0	2.0	7.3	2824	20	F126SE682(1)400(2)	SMW7.3682(1)400K91(2)
400	200	0.0082	SE/K91	6.0	2.0	7.3	2824	20	F126SE822(1)400(2)	SMW7.3822(1)400K91(2)
400	200	0.010	SE/K91	6.0	2.0	7.3	2824	20	F126SE103(1)400(2)	SMW7.3103(1)400K91(2)
400	200	0.012	SH/K93	6.0	2.7	7.3	2824	20	F126SH123(1)400(2)	SMW7.3123(1)400K93(2)
400	200	0.015	SH/K93	6.0	2.7	7.3	2824	20	F126SH153(1)400(2)	SMW7.3153(1)400K93(2)
400	200	0.018	SM/K95	6.0	3.2	7.3	2824	20	F126SM183(1)400(2)	SMW7.3183(1)400K95(2)
400	200	0.022	SM/K95	6.0	3.2	7.3	2824	20	F126SM223(1)400(2)	SMW7.3223(1)400K95(2)
VDC	VAC	Capacitance Value (µF)	Size Code (New/Legacy)	B (mm)	H (mm)	L (mm)	Chip Size	dV/dt (V/µs)	New KEMET Part Number	Legacy Part Number

(1) G = ±2%, R = ±2.5% (Legacy code = H), J = ±5%, K = ±10%.

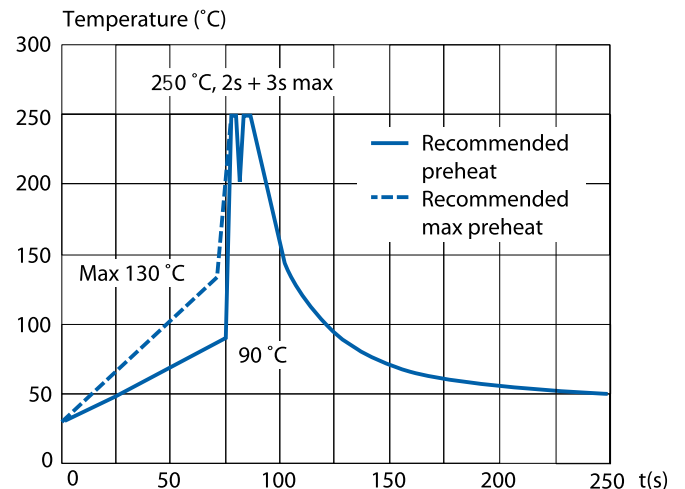
(2) Insert ordering code for lead type and packaging. See Ordering Options Table for available options.

## Soldering Process

Reflow soldering temperature is measured on the top body surface of the component. Preheating temperature should be less than 170°C. The time above 217°C should be less than 50 seconds. The peak temperature must not exceed 260°C.



Wave soldering: The recommended preheating temperature is 90°C (130°C maximum). The peak temperature 250°C may be applied for 2 – 5 seconds maximum. KEMET recommends wave soldering for parts with up to 2 mm height.



## Marking

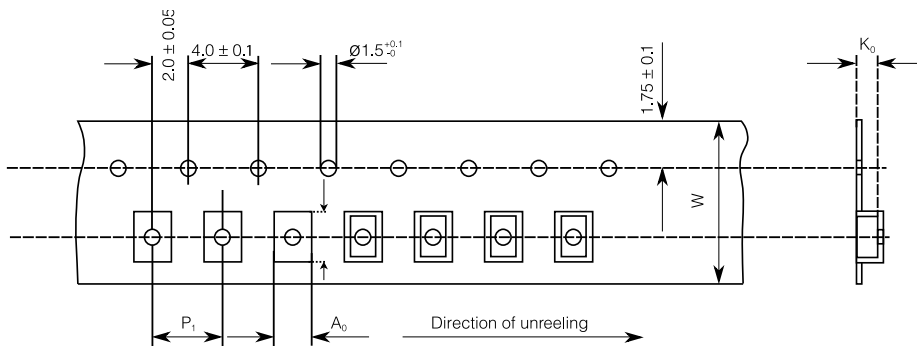
- Capacitance
- Capacitance tolerance code
- Rated voltage code
- Capacitor type S for SMW
- Manufacturing date code

## Packaging Quantities

Chip Size (EIA)	Base (mm)	Height (mm)	Length (mm)	Bulk	Reel Horizontal Orientation
2220	5.0	2.0	5.7	2000	3100
2220	5.0	3.0	5.7	2000	2400
2220	5.0	4.0	5.7	2000	2100
2824	6.0	2.0	7.3	2000	3100
2824	6.0	2.7	7.3	2000	2500
2824	6.0	3.2	7.3	2000	2300
2824	6.0	4.2	7.3	1000	1700

## Carrier Taping & Packaging (IEC 60286-2)

### Horizontal Taping Orientation



Chip Size (EIA) Horizontal Mounting	Dimensions in mm			Taping Specification							
	B	H	L	W	P <sub>1</sub>	A <sub>0</sub>	B <sub>0</sub>	K <sub>0</sub>	D	W <sub>1</sub>	W <sub>2</sub>
	Nominal	Nominal	Nominal	-0/+0.3	+/-0.1	Nominal	Nominal	Nominal	-/+2.0	-0/+2	Maximum
2220	5.0	2.0	5.7	12.0	8.0	5.5	6.0	2.8	330	12.4	22.0
2220	5.0	3.0	5.7	12.0	8.0	5.5	6.0	3.3	330	12.4	22.0
2220	5.0	4.0	5.7	12.0	8.0	5.5	6.0	4.3	330	12.4	22.0
2824	6.0	2.0	7.3	12.0	8.0	6.5	7.5	2.8	330	12.4	22.0
2824	6.0	2.7	7.3	12.0	8.0	6.5	7.5	3.3	330	12.4	22.0
2824	6.0	3.2	7.3	12.0	8.0	6.5	7.5	3.8	330	12.4	22.0
2824	6.0	4.2	7.3	12.0	8.0	6.5	7.5	4.8	330	12.4	22.0



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## Other KEMET Resources

Tools	
Resource	Location
Configure A Part: CapEdge	<a href="http://capacitoredge.kemet.com">http://capacitoredge.kemet.com</a>
SPICE & FIT Software	<a href="http://www.kemet.com/spice">http://www.kemet.com/spice</a>
Search Our FAQs: KnowledgeEdge	<a href="http://www.kemet.com/keask">http://www.kemet.com/keask</a>
Electrolytic LifeCalculator	<a href="http://www.kemet.com:8080/elc">http://www.kemet.com:8080/elc</a>

Product Information	
Resource	Location
Products	<a href="http://www.kemet.com/products">http://www.kemet.com/products</a>
Technical Resources (Including Soldering Techniques)	<a href="http://www.kemet.com/technicalpapers">http://www.kemet.com/technicalpapers</a>
RoHS Statement	<a href="http://www.kemet.com/rohs">http://www.kemet.com/rohs</a>
Quality Documents	<a href="http://www.kemet.com/qualitydocuments">http://www.kemet.com/qualitydocuments</a>

Product Request	
Resource	Location
Sample Request	<a href="http://www.kemet.com/sample">http://www.kemet.com/sample</a>
Engineering Kit Request	<a href="http://www.kemet.com/kits">http://www.kemet.com/kits</a>

Contact	
Resource	Location
Website	<a href="http://www.kemet.com">www.kemet.com</a>
Contact Us	<a href="http://www.kemet.com/contact">http://www.kemet.com/contact</a>
Investor Relations	<a href="http://www.kemet.com/ir">http://www.kemet.com/ir</a>
Call Us	1-877-MyKEMET
Twitter	<a href="http://twitter.com/kemetcapacitors">http://twitter.com/kemetcapacitors</a>

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