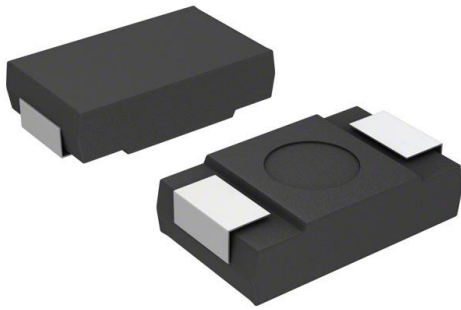


# SPCX331M0ER Datasheet

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<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	SPCX331M0ER-DG
Manufacturer	<a href="#">Cornell Dubilier Electronics (CDE)</a>
Manufacturer Product Number	SPCX331M0ER
Description	CAP ALUM POLY 330UF 20% 2.5V SMD
Detailed Description	330 $\mu$ F 2.5 V Aluminum - Polymer Capacitors 2917 (7343 Metric) 15mOhm 1000 Hrs @ 105°C

This model SPCX331M0ER is available at DiGi Electronics.

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## Purchase and inquiry

Manufacturer Product Number:

SPCX331M0ER

Series:

SPCX

Type:

Polymer

Tolerance:

±20%

ESR (Equivalent Series Resistance):

15mOhm

Operating Temperature:

-40°C ~ 105°C

Applications:

General Purpose

Lead Spacing:

-

Height - Seated (Max):

0.075" (1.90mm)

Mounting Type:

Surface Mount

Manufacturer:

Cornell Dubilier Electronics (CDE)

Product Status:

Obsolete

Capacitance:

330 µF

Voltage - Rated:

2.5 V

Lifetime @ Temp.:

1000 Hrs @ 105°C

Ratings:

-

Ripple Current @ High Frequency:

2.7 A @ 100 kHz

Size / Dimension:

0.287" L x 0.169" W (7.30mm x 4.30mm)

Surface Mount Land Size:

0.287" L x 0.169" W (7.30mm x 4.30mm)

Package / Case:

2917 (7343 Metric)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8532.22.0020

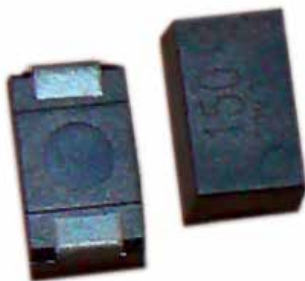
Moisture Sensitivity Level (MSL):

3 (168 Hours)

ECCN:

EAR99

# Type SPCX Solid Polymer Aluminum SMT Capacitors



Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

The solid polymer SPCX aluminum capacitor is an ideal choice for general purpose applications in audio-visual equipment, home appliances, computers, office equipment, optical and measuring equipment and industrial robots. The SPCX is a very cost effective capacitor in a compact low-profile package that is offered on tape and reel. The SPCX is environmentally green and RoHS compliant.

## Highlights

- A low-profile height of 1.9 mm
- Offered on tape and reel
- Can withstand 260 °C reflow for 10 s
- 15 mΩ ESR @ 100 kHz
- A great value in a small package

## Specifica-

**Operating Temperature Range:** -40 °C to +105 °C

**Capacitance Range:** 100 μF to 470 μF

**Operating Working Range:** 2.0, 2.5, 4.0, 6.3 Vdc

**Capacitance Tolerance:** ±20 % (120 Hz @ 20 °C)

**Surge Voltage:**

Vdc	2.0	2.5	4.0	6.3
Surge	2.5	3.1	5.0	8.0

**Rated Ripple Current:** See ratings table

### Life Test:

Apply rated voltage at +105 °C ±2 °C for 1000 h

- \* Leakage current: ≤ ratings table values
- \* Capacitance: ±10% of initial measured value
- \* DF: ≤ ratings table values
- \* Appearance: No abnormal change to occur

### Moisture Resis-

+60 °C ±2 °C @ 90% RH; rated voltage for 500 h

- \* Leakage current: ≤ rating table values
- \* Capacitance: +70%, -20% (2V, 2.5V)  
+60%, -20% (4V)  
+50%, -20% (6.3V)  
of initial measured value
- \* DF: ≤200% of initial specified value
- \* Appearance: No abnormal change to occur

### Shelf Life Test:

+105 °C ±2 °C for 500 h

- Leakage current: ≤ rating table values
- Capacitance: ±10% of initial measured value
- DF: ≤ ratings table values
- Appearance: No abnormal change to occur

### Surge Test:

Test temperature is +15 °C to +35 °C in series with a 1000 Ω resistor with the surge voltage applied for 1000 cycles of 30±5 s (ON) and 5 min 30 s (OFF)

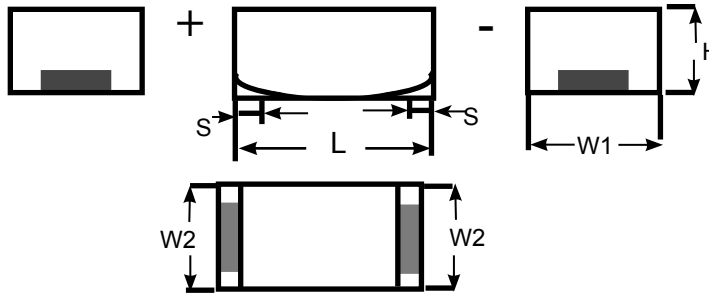
- Leakage current: I≤0.1CV
- Capacitance: ±10% of initial measured value
- DF: ≤ the values in the ratings table
- Appearance: No abnormal change to occur

### Vibration

10 Hz to 2000 Hz to 10 Hz frequency applied one cycle per 20 min at a total amplitude of 1.5 mm. Direction and duration of vibration will be 2 h each in the X,Y and Z planes for total of 6 h with the capacitor soldered in place.

- Appearance; No abnormal change to occur.
- Capacitance: Measured value to be stabilized during test, when measured several times within 30 min before completion of test.

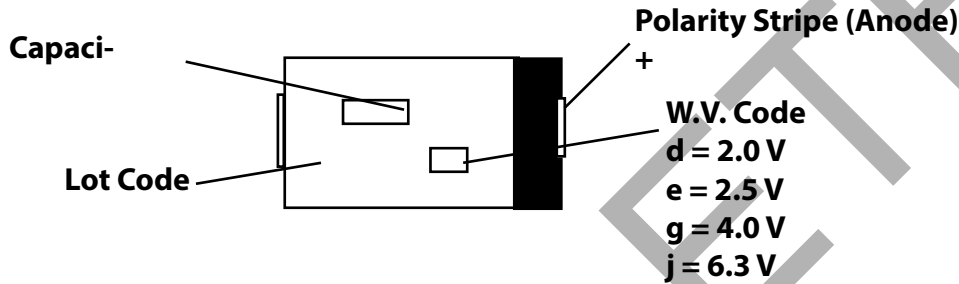
## Outline Drawings



Surface finish of terminal; Tin (Sn)

L (±0.2)	W1 (±0.2)	W2 (±0.1)	H (±0.2)	S (±0.3)
7.3 mm	4.3 mm	2.4 mm	1.9 mm	1.3 mm

## Marking

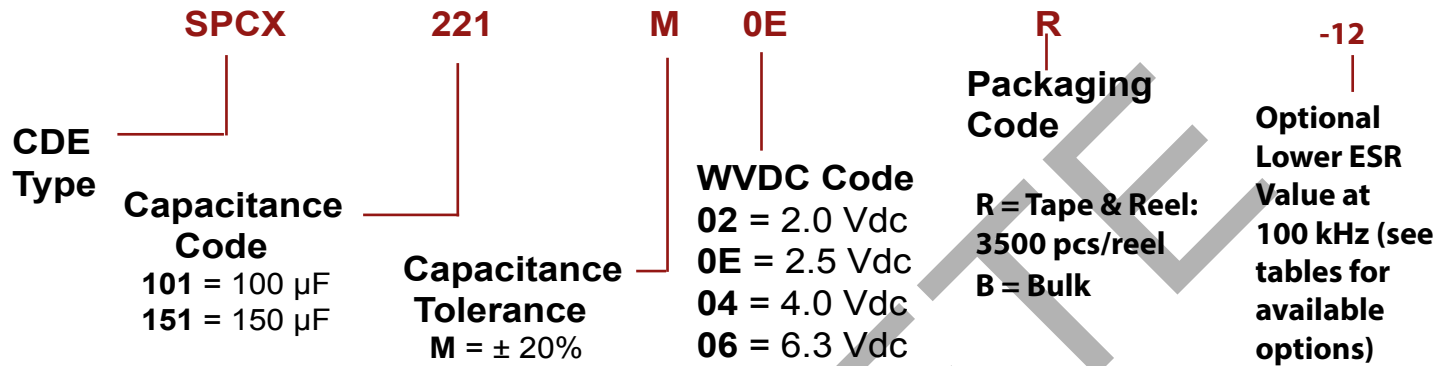


## Ratings

Cap (µF)	Catalog Part Number	Max. D.F. @ 120Hz	Max. Leakage Current (µA)	Max. ESR @ 100kHz/20°C (mΩ)	Max. Ripple Current @ 100kHz/20° to 105°C (Arms)
<b>2.0 Vdc (Surge 2.5Vdc)</b>					
220	SPCX221M02R	0.06	44	15	2.7
270	SPCX271M02R-12	0.06	54	12	3.0
330	SPCX331M02R	0.06	66	15	2.7
330	SPCX331M02R-12	0.06	66	12	3.0
390	SPCX391M02R	0.06	78	15	2.7
470	SPCX471M02R	0.06	94	15	2.7
<b>2.5 Vdc (Surge 3.1Vdc)</b>					
220	SPCX221M0ER	0.06	55	15	2.7
330	SPCX331M0ER	0.06	82.5	15	2.7
390	SPCX391M0ER	0.06	97.5	15	2.7
470	SPCX471M0ER	0.06	117.5	15	2.7
<b>4.0 Vdc (Surge 5.0Vdc)</b>					
150	SPCX151M04R	0.06	60	15	2.7
180	SPCX181M04R	0.06	72	15	2.7
180	SPCX181M04R-12	0.06	72	12	3.0
220	SPCX221M04R	0.06	88	15	2.7
220	SPCX221M04R-12	0.06	88	12	3.0
<b>6.3 Vdc (Surge 8.0Vdc)</b>					
100	SPCX101M06R	0.06	63	15	2.7
120	SPCX121M06R	0.06	75.6	15	2.7
150	SPCX151M06R	0.06	94.5	15	2.7
150	SPCX151M06R-12	0.06	94.5	12	3.0

# Type SPCX Solid Polymer Aluminum SMT Capacitors

## Part Numbering System



Tape: 12 mm wide; negative terminal towards the sprocket holes

Reel: 330 mm Dia.

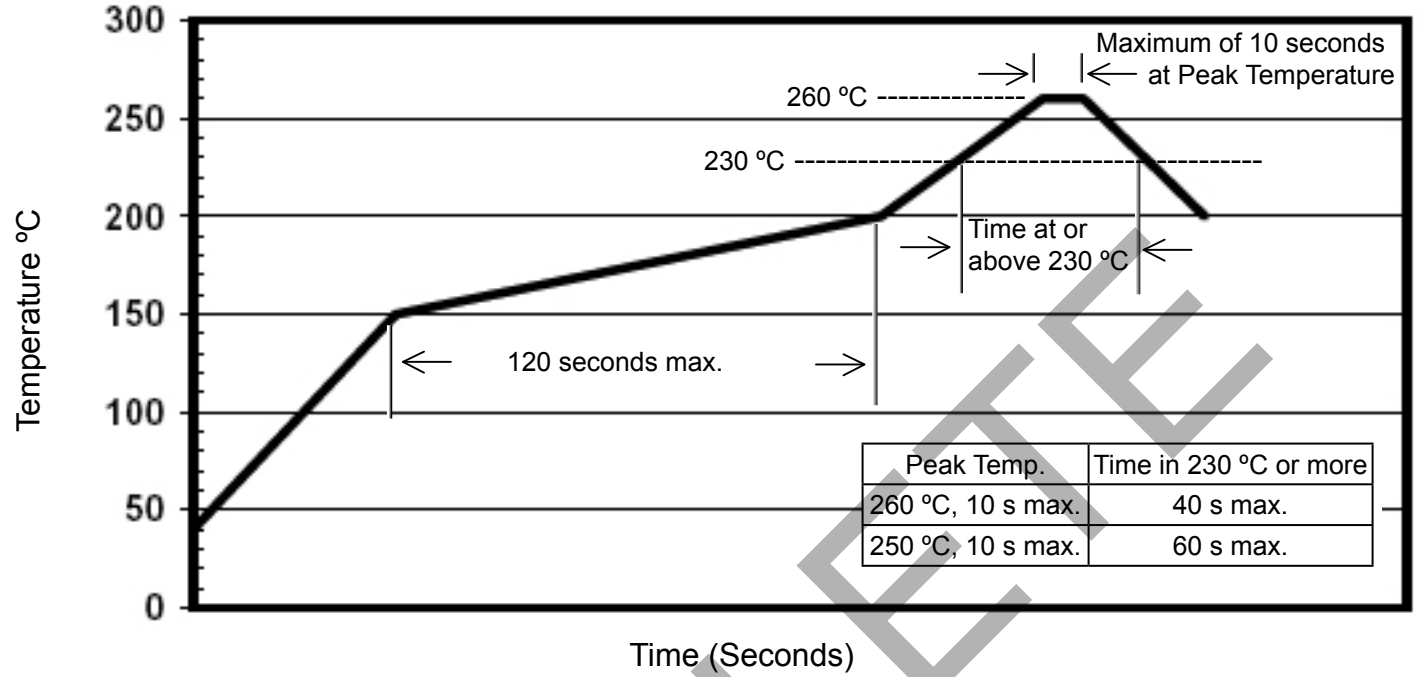
MSL 2 – when in the bag

MSL 3 – when outside the bag

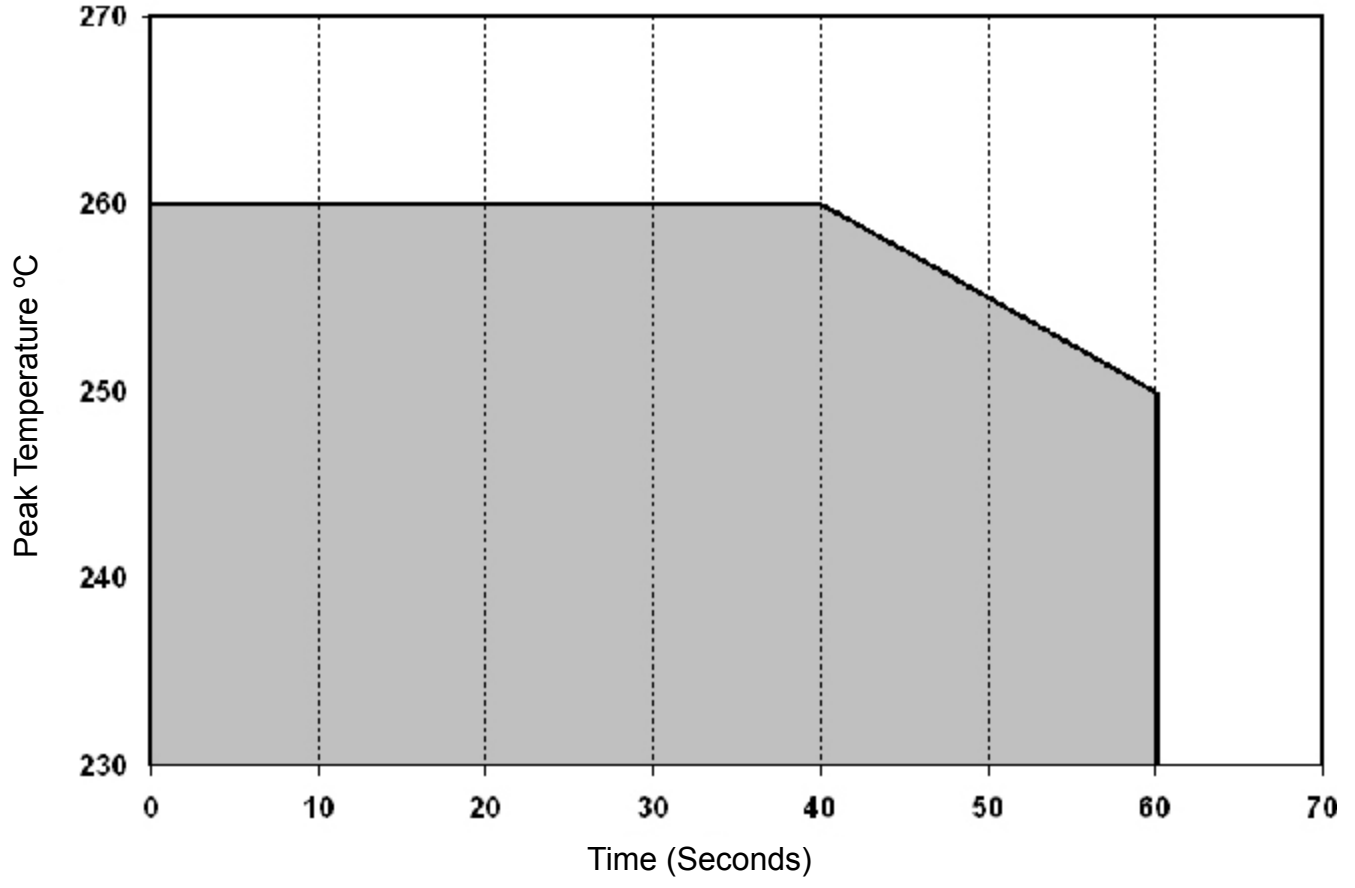
Maximum of 2 reflow solderings; 2nd reflow should be within 5 days of the first reflow soldering.

**Reflow Soldering Profile**

**Temperature on Surface of Capacitor**



**Time At or Above 230 °C**



# Type SPCX Solid Polymer Aluminum SMT Capacitors

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OBSOLETE

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