

11.12.2015

## Produktänderung

### Neuer Lötprozess bei EPCOS PEC MKP AC-Kondensatorterminals M6, M8 und M10

Das zum Verlöten der M6-, M8- und M10-Schraubterminals von EPCOS PEC MKP AC-Kondensatoren verwendete Löt-Flussmittel wird ersetzt: Statt des derzeit genutzten Flussmittels (Ammonium-Chlorid) wird künftig ein chlorfreies Flussmittel verwendet.

Ferner werden die M6-Schraubanschlüsse um 1 mm verlängert und mit einer Abschrägung versehen. Während des Verlötens werden die Schraubterminals künftig mit einer Maske abgedeckt. Zusammen mit der neuen Abschrägung wird damit verhindert, dass Lötzinn auf das Schraubgewinde fließen kann. Die Anschlüsse M8 und M10 sind von dieser Änderung nicht betroffen.

Eine detaillierte Beschreibung finden Sie im Anhang.

Die Änderungen werden in den Werken Gravataí, Brasilien, und Zhuhai, China, eingeführt.

#### Betroffene Produkte

Bestellnummer
B32361*
B32352*
B32364*

Geplante Einführung: 18. März 2016 (oder früher auf Kundenwunsch)

**Anlage** PCN (ID No. FILM P15-21)  
Modified dimensions of M6 screw terminals  
Tin soldering flux changed for M6, M8 and M10 screw terminals  
Type tests qualification for improved M6, M8 and M10 screw terminals

**Kontakt** Ayse Kartal, CAP FILM P PM, München

**Kunden wenden sich bei Fragen bitte direkt an ihren Ansprechpartner im Vertrieb.**

## Product / Process Change Notification

<b>1. ID No.:</b> FILM P15-21		<b>2. Date of announcement:</b> December 11, 2015	
<b>3. Product / product group:</b> EPCOS PEC MKP AC capacitors	<b>Old ordering code:</b> B32361* B32362* B32364*	<b>New ordering code:</b> No change	<b>Customer part number:</b>
<b>4. Description of change:</b> <p>The soldering flux used for soldering the terminals of M6, M8 and M10 of EPCOS PEC MKP AC capacitors will be changed. Instead of the flux (ammonium chloride) presently used, a flux without chloride will be used in future.</p> <p>Also, the M6 screw terminals will be increased by 1 mm and a chamfer will be added. During the soldering process the screw terminals will be covered by a mask. In combination with the newly introduced chamfer this will avoid that melted tin can flow over the surface of the screw. The terminals M8 and M10 are not affected by this change.</p> <p>For details please refer annex.</p> <p>The changes will be implemented in the plants Gravataí, Brazil, and Zhuhai, China.</p>			
<b>5. Effect on the product or for the customer (benefit, quality, specification, lead time):</b> <p>The changes will improve the quality of screw terminals of PEC MKP AC capacitors.</p>			
<b>6. Quality assurance measures / risk assessment:</b> <p>Quality procedures will remain unchanged.</p>			
<b>7. Scheduled date of change:</b> March 18, 2016			
<b>8. Estimated date of first delivery of changed product:</b> March 18, 2016; earlier if requested by the customer. <p>If EPCOS does not receive notification to the contrary within a period of 10 weeks, EPCOS assumes that the customer agrees to the change. For an interim period we cannot rule out that old as well as new products will be shipped.</p>			
Quality Management Name Manuela Alvarez		Signature signed by Manuela Alvarez	
Product Marketing Name Ayse Kartal Tel. +49 89 54020 2482 Email ayse.kartal@epcos.com		Signature signed by Ayse Kartal	
<b>Customer feedback</b>			
Customer acknowledgement		Signature	

**Annex to UPtoDATE 151211PC2 and PCN FILM P15-21 of December 11, 2015 /  
New soldering process for EPCOS PEC MKP AC capacitor terminals M6, M8 and M10**

**1) Modified dimensions of M6 screw terminals**

The length of M6 screw terminal has been increased by 1 mm and a chamfer has been added– Fig. 01 (b). The chamfer will work with a mask introduced in the process improvement to protect the screw thread during tin soldering process and prevent melted tin from flowing over to the surface of screw.

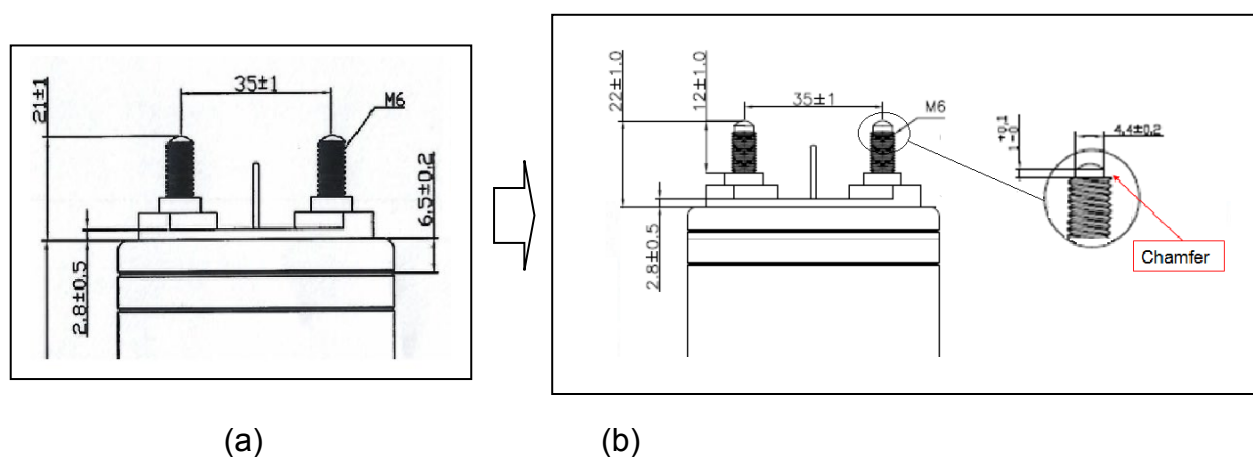


Fig. 1 – Drawing of M6 screw terminal

(a) Current M6 terminal

(b) Improved M6 terminal with chamfer and increased length of 1 mm

**2) Tin soldering flux changed for M6, M8 and M10 screw terminals**

From urea base flux (ammonium-chloride) to rosin flux (no chlorine)

### 3) Type tests qualification for improved M6, M8 and M10 screw terminals

Item	Type test	Test specification	Approval criteria	Results
Screw terminal M6	Damp heat test	40 °C/93 % RH/1000 h	Capacitance variation max. 3%	Approved
	Salt spray test	As per ASTM B117 duration: 72 h	no oxidation	Approved
	Torque test	Torque $\geq 4$ N · m	$\geq 4$ N · m	Approved
	Leakage test	Temperature: $80 \pm 5$ °C Vacuum pressure $\leq 0.5$ mbar	no leakage	Approved
Screw terminal M8	Damp heat test	40 °C /93 %RH/1000 h	Capacitance variation max. 3%	Approved
	Salt spray test	As per ASTM B117 duration: 72 h	no oxidation	Approved
	Torque test	Torque $\geq 10$ N · m	$\geq 10$ N · m	Approved
	Leakage test	Temperature: $80 \pm 5$ °C Vacuum pressure $\leq 0.5$ mbar	no leakage	Approved
Screw terminal M10	Damp heat test	40 °C /93 %RH/1000 h	Capacitance variation max. 3%	Approved
	Salt spray test	As per ASTM B117 duration: 72 h	no oxidation	Approved
	Torque test	Torque $\geq 12$ N · m	$\geq 12$ N · m	Approved
	Leakage test	Temperature: $80 \pm 5$ °C Vacuum pressure $\leq 0.5$ mbar	no leakage	Approved