

October 29, 2021

## PCN

### Change of potting material for NTC thermistors

Potting material is used for the manufacture of EPCOS NTC thermistors listed below. Since the previously used potting material contains Bisphenol A (BPA), it will be replaced by a REACH compliant potting material in the future. The potting process itself remains unchanged.

Due to its hazardous properties, the use of BPA is restricted in the EU to protect human health and the environment, the old potting material will no longer be supplied by the supplier.

#### Affected products

Ordering code	Type
B57045K0102K000	K45
B57045K0103A001	K45
B57045K0103J000	K45
B57045K0103K000	K45
B57045K0104K000	K45
B57045K0153J000	K45
B57045K0153K000	K45
B57045K0154K000	K45
B57045K0222K000	K45
B57045K0223A001	K45
B57045K0223K000	K45
B57045K0333K000	K45
B57045K0471K000	K45
B57045K0472J000	K45
B57045K0472K000	K45
B57045K0473K000	K45
B57045K0474K002	K45
B57045K0682K000	K45
B57045K0682K002	K45
B57045K0683K000	K45
B57312J2871A002	J312
B57831M0871A003	M831
B57832M0992A001	M832
B57832M0992A006	M832
B57837M0891A001	M837
B57837M0891A003	M837

#### TDK Electronics AG

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Thermistors, Sensors  
 Internal / External

211029THERM1e

October 29, 2021

Scheduled date of change: February 7, 2022  
(or earlier, with written approval by the customer)  
Estimated date of first deliveries: February 7, 2022  
(or earlier, with written approval by the customer)

**Enclosure** PCN (ID No. T126/23)  
Validation test plan

**Contact** Hans Schwang, TPS NTC PM, Berlin

**Customers are asked to address inquiries directly to their sales contacts.**

## Product / Process Change Notification

<b>1. ID No.</b> T126/23		<b>2. Date of announcement</b> October 29, 2021	
<b>3. Product / product group</b> NTC thermistors K45 J312 M831 M832 M837	<b>Old ordering code</b> see list	<b>New ordering code</b> No change	<b>Customer part number</b> NA
<b>4. Description of change</b> Potting material is used for the manufacture of affected EPCOS NTC thermistors. Since the previously used potting material contains Bisphenol A (BPA) which is listed in REACH annex XIV by European Commission, it will be replaced by a REACH compliant material. The current potting material will be discontinued by the manufacturer. The potting process itself remains unchanged.			
<b>5. Effect on the product or for the customer (benefit, quality, specification, lead time)</b> No negative impact on sensor performance, quality, specification or delivery time due to this replacement.			
<b>6. Quality assurance measures / risk assessment</b> Validation tests and release of production done according to IATF 16949. Lot by lot process controls via IPQC and QA outgoing inspection according to control plan will be performed in the same way as per the existing practice.			
<b>7. Scheduled date of change</b> February 7, 2022 (or earlier, with written approval by the customer)			
<b>8. Estimated date of first delivery of changed product</b> February 7, 2022 (or earlier, with written approval by the customer) If TDK Electronics AG does not receive notification to the contrary within a period of 10 weeks, TDK Electronics AG assumes that the customer agrees to the change. <input type="checkbox"/> For an interim period we cannot rule out that old as well as new products will be shipped. <input type="checkbox"/> Future shipments can consist of old and new products as the new changed product is used as an alternative to the old product.			
Quality Management Name Mr. Philipp Schmidt-Weber		Signature Signed Schmidt-Weber	
Product Marketing Name Hans Schwang Tel. +49 30 890 4055 5132 E-mail hans.schwang@tdk-electronics.tdk.com		Signature Signed Schwang	

### Customer feedback

**Customer acknowledgement**

Signature

## Annex to UPtoDATE 211029THERM1 of October 29, 2021 Change of potting material for NTC thermistors

### Validation test plan

Verification summary						Test planning		
No	Description	SC	Reference	Test Condition	Criteria	Start	Finish	Lab
ELECTRICAL CHARACTERISTICS								
1	R <sub>25</sub>			T = 25°C; Oil bath	Min : 9500 Ohm Max : 10500 Ohm	27-Sep-21	29-Sep-21	TDK
2	R <sub>n</sub> at 100			T = 100°C; Oil bath	Min : 442 Ohm Max : 656.8 Ohm	27-Sep-21	29-Sep-21	TDK
3	B <sub>25/100</sub>			T <sub>25</sub> /T <sub>100</sub> ; Oil bath	Min : 4085 K Max : 4515 K	27-Sep-21	29-Sep-21	TDK
RELIABILITY								
4	Storage in dry heat			Storage in upper category temperature Temp.= 125°C Duration= 1000 hours	$\Delta R_{25}/R_{25} < 3\%$ No visible damage	30-Sep-21	8-Nov-21	TDK
5	Storage in damp heat, steady state			Temp. of air= 40°C Relative humidity= 93% Duration= 56 days	$\Delta R_{25}/R_{25} < 3\%$ No visible damage	30-Sep-21	8-Nov-21	TDK
6	Endurance			P <sub>max</sub> = 450 mW Duration= 1000 hours	$\Delta R_{25}/R_{25} < 3\%$ No visible damage	30-Sep-21	8-Nov-21	TDK

This specified validation plan will be processed for product family members M832, M837 and K45. The results are available latest by CW 46.