

January 31, 2012

## Notification of changes Production transfer of temperature sensors on Batam Island

The production of EPCOS NTC thermistors will be transferred from the Seraya plant on the island of Batam, Indonesia, to the expanded main production plant in Panbil.

### Affected products

Ordering code	Ordering code	Ordering code
B57011K*	B57501K*	B57862S*
B57022K*	B57504K*	B57863S*
B57045K*	B57510M*	B57864F*
B57118*	B57514K*	B57864S*
B57121J*	B57524K*	B57867F*
B57124J*	B57550F*	B57867S*
B57150K0*	B57702M*	B57869S*
B57164K*	B57703M*	B57881F*
B57164S*	B57703M1*	B57891M*
B57220K*	B57800K*	B57891M1*
B57222K*	B57800M*	B57891S*
B57227K*	B57821M*	B57891S1*
B57300K*	B57821S*	B57895M*
B57300L*	B57821S1*	B57895S*
B57301K*	B57822M*	B57895S1*
B57420K1*	B57841M*	B57962S*
B57500K*	B57861S*	B57964S*
B57500M*	B57862F*	B57991S*

The relocation process will begin in August 2012 and is scheduled for completion in September 2012.

**Enclosure** Notification of changes (PCN)  
Transfer of production on Batam Island

**Contact** Daniel Oelbermann, TDK-EPC SEN NTC PM, Berlin

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



**Product / Process Change Notification  
Produkt-/ Prozess-Änderungsmitteilung**

<b>1. ID No. / ID-Nr.:</b> SEN T116/16		<b>2. Date of announcement / Datum der Ankündigung:</b> January 31, 2012	
<b>3. Type / Produktgruppe:</b> NTC thermistors / NTC-Thermistoren	<b>Old ordering code / Alte Bestell-Nr.:</b> see attached list of ordering codes in UPtoDATE/ siehe angefügte Bestellnummernliste im UPtoDATE	<b>New ordering code / Neue Bestell-Nr.:</b> No change Keine Änderung	<b>Customer part number / Kundensachnummer:</b>
<b>4. Description of change / Beschreibung der Änderung:</b> <p>Production of EPCOS sensor back-ends on Batam Seraya, Indonesia, will be transfered and centralized in the expanded existing main production plant at Batam Panbil located on the same island. The main production plant at Panbil focuses on sensor production and allows us to meet the growing demand for sensors. For more details, please refer to the attached presentation./</p> <p>Die EPCOS Sensor-Backend-Fertigung in Batam Seraya/Indonesien wird in das erweiterte bereits bestehende Hauptproduktionswerk in Batam Panbil/Indonesien verlagert. Das Hauptproduktionswerk ist auf die Sensorenfertigung spezialisiert und ermöglicht uns den steigenden Sensorbedarf zu bedienen. Für weitergehende Details beachten Sie bitte die angefügte Präsentation.</p>			
<b>5. Effect on the product or for customers (quality, specification, lead time) / Auswirkung auf das Produkt oder für den Kunden (Qualität, Spezifikation, Lieferzeiten):</b> <p>No effect on product design, appearance, quality, specification and lead time./</p> <p>Keine Auswirkung auf das Design, Erscheinungsbild, Qualität, Spezifikation und Lieferzeit.</p>			
<b>6. Quality assurance measures / Maßnahmen zur Qualitätssicherung:</b> <p>The Batam Panbil plant is qualified according to ISO/TS 16949. In order to maintain the same quality level that our customers expect, we will continue to apply the same quality assurance measures at this plant. The necessary buffer stock for the internal process transfers will be put in place. In addition to the existing quality assurance measures, extended IPQC (In Process Quality Check) standards and expanded outgoing shipping inspections will be temporarily implemented. The complete production transfer will be supported by experienced production engineers from the European parent plants. /</p> <p>Das Werk Batam Panbil ist gemäß ISO/TS 16949 qualifiziert. Das gleiche Qualitätslevel wird durch die entsprechenden qualitätssichernden Maßnahmen im Fertigungsprozess im Werk Batam Panbil sichergestellt. Es wird ein Sicherheitsbestand für den Verlagerungsprozess aufgebaut. Zusätzlich zu den derzeitigen Qualitätssicherungsmaßnahmen werden temporär die IPQC (In Process Quality Check) und die Ausgangskontrolle erweitert. Die gesamte Verlagerung wird von Ingenieuren aus den europäischen Mutterwerken unterstützt.</p>			



**7. Scheduled date of introduction / Geplante Einführung:**

Milestones:

- Completion of the plant expansion by 07/2012
- Start of transfer in 08/2012
- Reaching 100% of capacity at the expanded plant by the end of 09/2012
- Customer audits will be possible from 10/2012 onwards

Beginning in 08/2012, some parts will be shipped from the expanded plant at Batam Panbil. /

Meilensteine:

- Fertigstellung der Werkserweiterung bis 07/2012
- Start der Verlagerung in 08/2012
- Bereitstellung von 100% der Fertigungskapazität im erweiterten Werk bis Ende 09/2012
- Kunden Audits sind ab 10/2012 möglich

Ab 08/2012 erfolgen Teillieferungen aus dem erweiterten Werk Batam Panbil.

**8. Customer feedback / Rückmeldung vom Kunden:**

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.

Falls EPCOS innerhalb von 10 Wochen keine gegenteilige Mitteilung erhält, geht EPCOS davon aus, dass die geplante Änderung vom Kunden akzeptiert ist. Innerhalb einer Übergangszeit kann es vorkommen, dass sowohl alte wie auch neue Ware geliefert wird.

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Signature

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Signature

sgd. D. Oelbermann

Customer acknowledgement

Bestätigung durch den Kunden

Signature

# **Transfer of Batam Seraya production to our main existing sensor plant in Batam Panbil, Indonesia**

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# Transfer of production on Batam Island, Indonesia

We will ramp down the current sensor plant Batam Seraya and transfer the production to our existing main sensor plant in Batam Panbil, Indonesia

## Contents of this document

- Location, layout and architecture
- What will be transferred?
- Reasons and advantages
- Transfer schedule
- Actions to ensure delivery performance
- Actions to ensure quality performance
- FAQ?



# Batam is a well-established production location

EPCOS PPD  
Plant Johore Bahru  
Malaysia  
Founded 2001

EPCOS SAW  
Plant Singapore  
Founded 1998

EPCOS Sensor  
Plant Batam  
Indonesia  
Founded 1990

Batam Island is located near Singapore



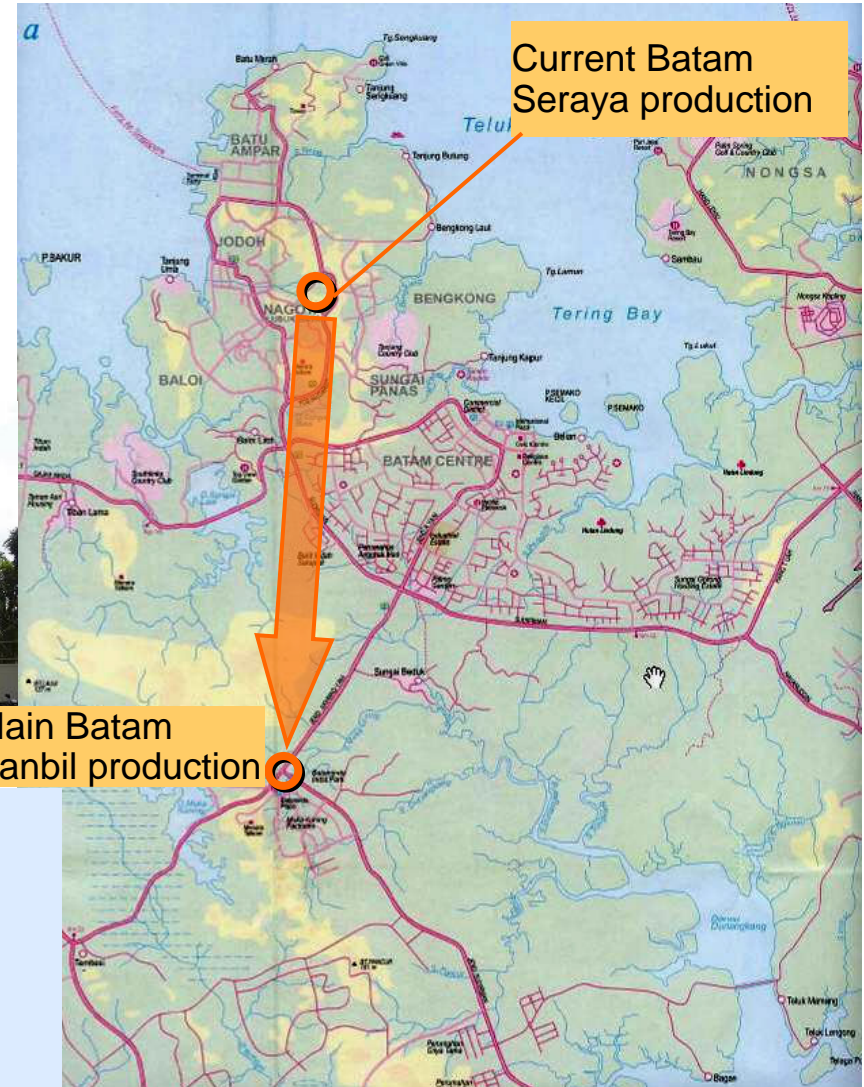


# Introduction to expanded sensor plant

## Address

### PT EPCOS INDONESIA

Jalan EPCOS Jaya  
 Blok B 1-10  
 Panbil Industrial Estate  
 Muka Kuning  
 Batam 29433  
 Indonesia



The Batam Panbil sensor plant is located 15 kilometers from the current Seraya plant in one of the highest developed industrial areas of Indonesia.

# Batam Panbil production location

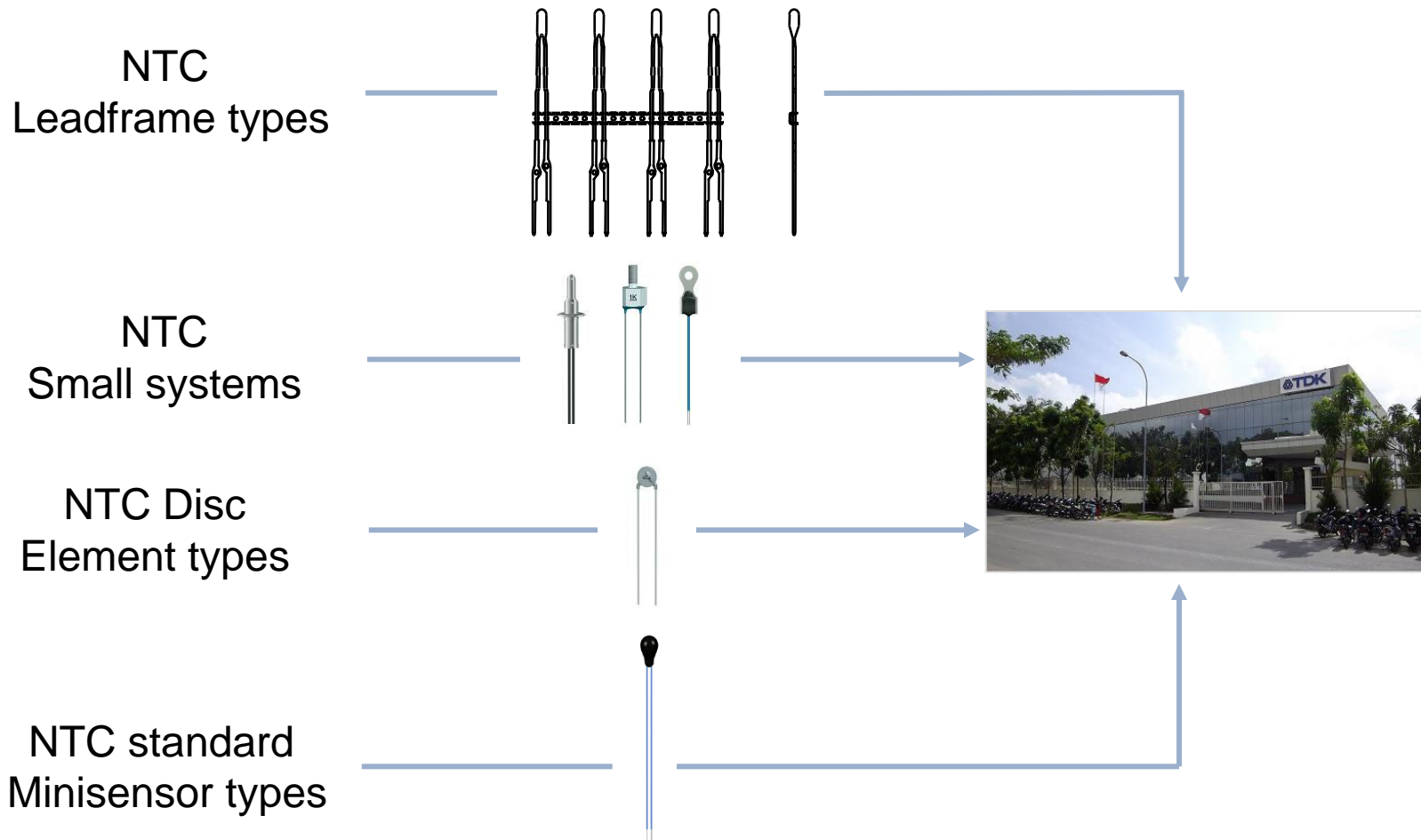


Current view





# What will be transferred?



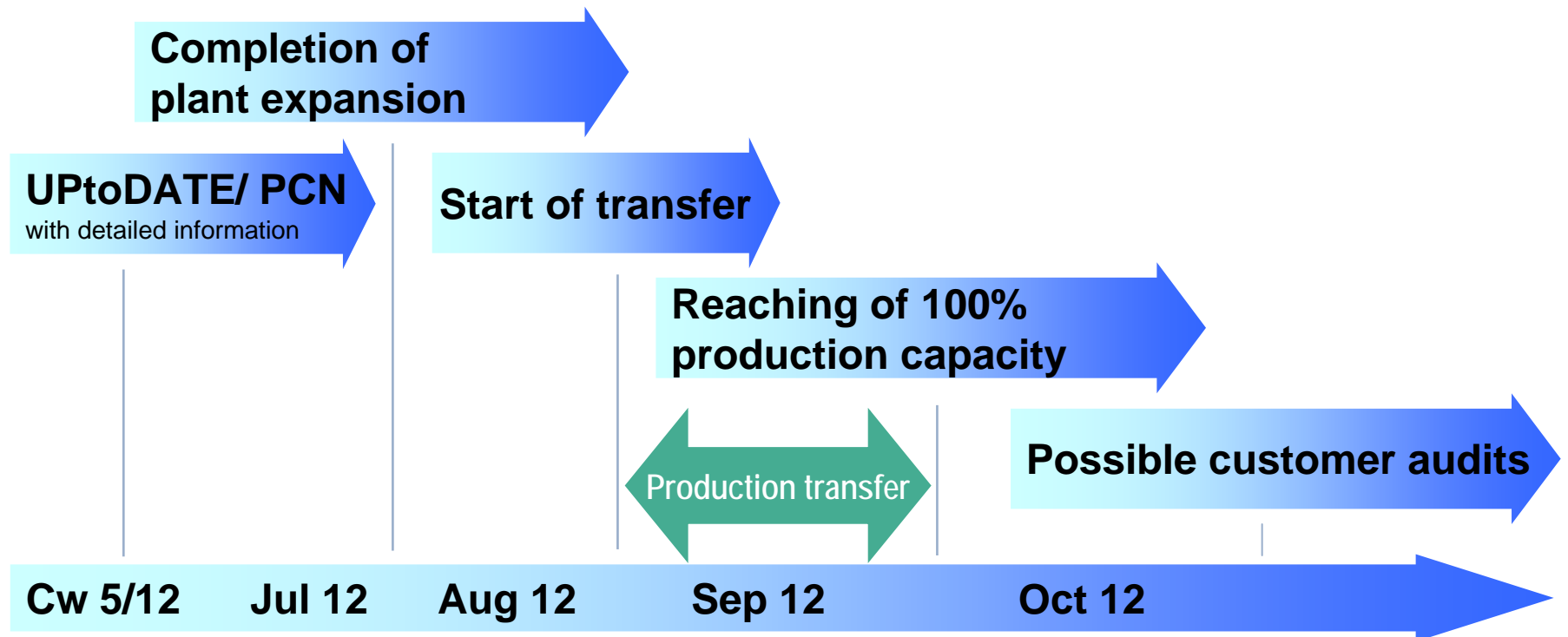
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## Reasons and advantages

- Standardized production system and supply chain management
- Standardized technical and quality standards
- Panbil plant is located in a highly developed industrial area with advantageous interaction to other fields of industries and suppliers
- Highly developed industrial area with optimal infrastructural connections as well as independent water and power supplies
- Additional space to ensure rising quality and capacity demands

# Transfer schedule

- Starting August 2012 first product deliveries will be shipped from the expanded Batam Panbil plant (parallel to Batam Seraya plant)



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## Actions to ensure delivery performance

- Individual scheduling of transfer buffer stock depending on customer demands and requirements
- Partial parallel production at current Batam Seraya and expanded Batam Panbil plant
- Gradual transfer of production lines
- Support of the complete production transfer by experienced production engineers from European plants



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## Actions to ensure quality performance

- Implementing additional quality assurance measures:
  - » Expanded IPQC (In Process Quality Check) standards
  - » Expanded shipping inspection prior delivery
- Performing internal production release procedures for different product and process families
- Support of the complete production transfer by experienced production engineers from European plants

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## FAQs

### **Can I visit the new plant prior production transfer?**

- > You are welcome to visit us. We do our best to fulfill your time proposal.

### **When can I perform a process audit?**

- > After the complete production transfer, after October 12 onwards. Timing can be discussed in detail in May 12.

### **How can I identify sensors produced after the transfer?**

- > During a defined time period each packing box will be clearly marked.

### **Can I get production and process release documents?**

- > We will set up internal production release procedures for different product families. These documents will be provided on request.



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