

March 14, 2008

#### Notification of changes

# Relocation of production of NTC thermistor elements with lead spacing

Beginning in June 2008 EPCOS will produce the following NTC thermistor elements with lead spacing, which are already being manufactured in Batam, Indonesia, in an additional production plant, which is also located in Batam, Indonesia:

- B57164E\*
- B57164R\*
- B57871S\*
- B57875S\*
- B57881S\*
- B57885S\*

Completion of the relocation process is scheduled for July 2008.

**Enclosures:** Process change notification (PCN)

Presentation "Introduction to new EPCOS sensor plant in Batam, Indonesia"

Contact: Daniel Oelbermann, EHI KB S SE PM, Berlin

Customers should address inquiries straight to their EPCOS sales contacts.



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

<b>1. ID No. / ID-Nr.</b> : KB 08/109		2. Date of announcement / Datum der Ankündigung: Mar. 14, 2008		
3. Type / Produktgruppe:	Old ordering code / Alte Bestell-Nr.:		New ordering code / Neue Bestell-Nr.:	Customer part number / Kundensachnummer:
NTC-Thermistor: E164, R164, S871, S875, S881, S885	B57871	E*, B57164R*, S*, B57875S*, S*, B57885S*	No change in ordering code	N/A

#### 4. Description of change / Beschreibung der Änderung:

The EPCOS NTC element production in Batam, Indonesia will be transferred and centralized in a new EPCOS plant, located on the same Island. The new plant will be focused on sensor production and offers us the possibility to support our growing sensor demands. For more details please refer to the attached presentation.

#### 5. Effect on the product or for customers (quality, specification, lead time) / Auswirkung auf das Produkt oder für den Kunden (Qualität, Spezifikation, Lieferzeiten):

The equipment, materials, operators, processing and management will not be changed. There are no impacts on fit, form, function, design, quality, reliability and delivery time.

#### 6. Quality assurance measures / Maßnahmen zur Qualitätssicherung:

A detailed transfer planning was defined. The necessary buffer stock for the internal process transfers will be put in place.

In addition to the existing quality assurance measures (e. g.: OIP, process accompanied inspections) a new outgoing shipping inspection will be installed temporarily.

The complete production transfer will be supported by engeneering staff from EPCOS Deutschlandsberg. The internal production release will be performed on representatives of each product familiy during transfer

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

The following milestones are planned:

- Completion of the new plant until 05/08
- Transfer in 06/08
- Process capability data available two weeks after transfer of each single production line
- Reaching of 100% of capacity at the new plant end of 07/08
- Customer Audits are possible beginning of 08/08
- Beginning with 06/08 the deliveries will be partly from the new plant

#### 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.

Quality Management:	Signature
Name: Dr. W. Pint	sgd. Dr. Pint



**Product Marketing:** 

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E-mail: daniel.oelbermann@epcos.com

Name: Daniel Oelbermann

Signature

sgd. Daniel Oelbermann

Customer acknowledgement

Signature

Bestätigung durch den Kunden



Introduction to new EPCOS sensor plant in Batam, Indonesia

#### **Contents**

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



## Address of new factory

# PT EPCOS INDONESIA

Jalan Epcos Jaya, Blok B 1-10 Kawasan Industri Panbil

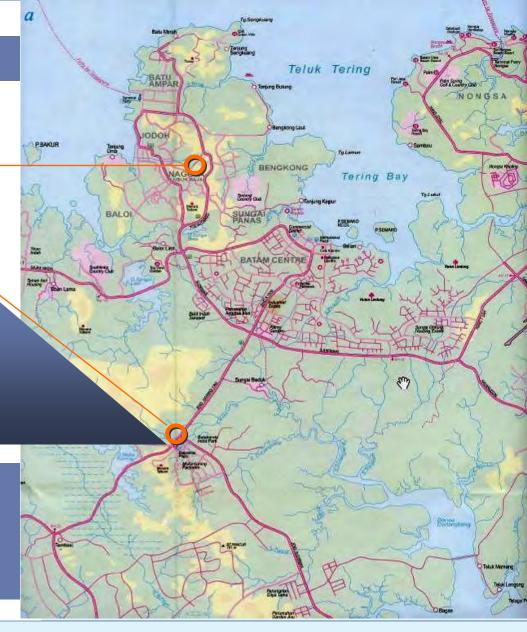
Muka Kuning

Batam 29433 Indonesia Current EPCOS
Subcon

New EPCOS plant



The new EPCOS plant is located in 15 Kilometers distance to the old plant in one of the highest developed industrial areas of Indonesia.





### Batam is traditional production location since 1990

**EPCOS AB** plant Johore Bahru, Malaysia founded 1996

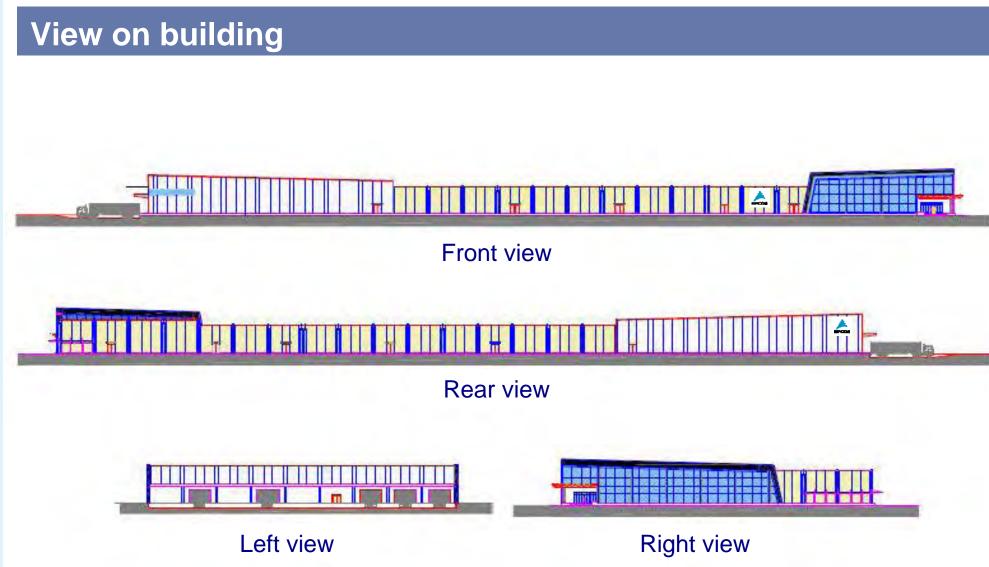
**EPCOS SAW** plant Singapore founded 1982

**Current EPCOS** KB plant, Batam Indonesia founded 1990

SOUTH CHINA SEA KOTA KINABALU. LAYSIA MEDAN KUALALUMPUR SABAH DARUSSAL SULAWESI SEA SERAWAK SINGAPORE KUCHING ATAM & BINTAN PADANG P. KALIMANTAN P. SUMATERA P. SULAWESI BANJARMASIN PALEMBANG **JAKARTA** MAKASSAR JAVA SFA SEMARANG BANDUNG P. JAWA SURABAYA YOGYAKARTA PLOMBOK N

Batam Island is located in view of Singapore.







#### **Architecture**

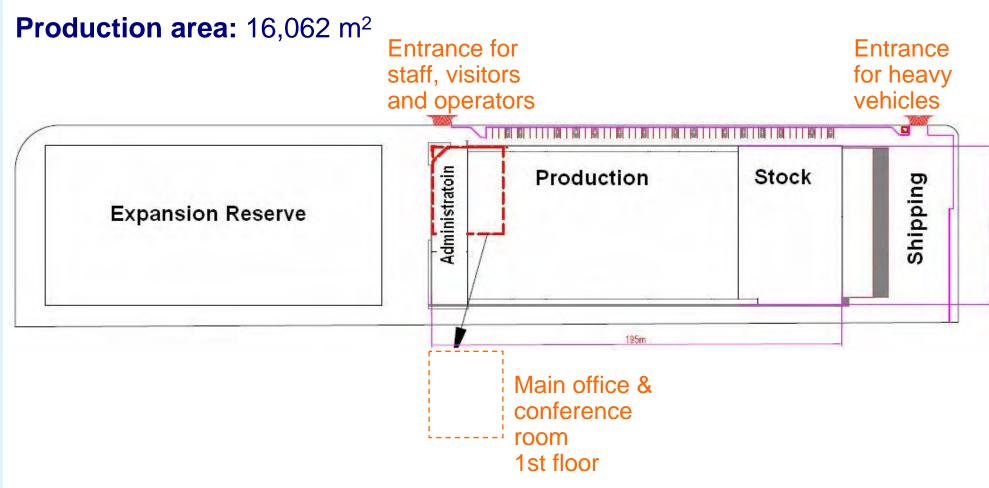
Façade, colors and tinted windows are similar to **EPCOS KB plant in** Johore Bahru, Malaysia





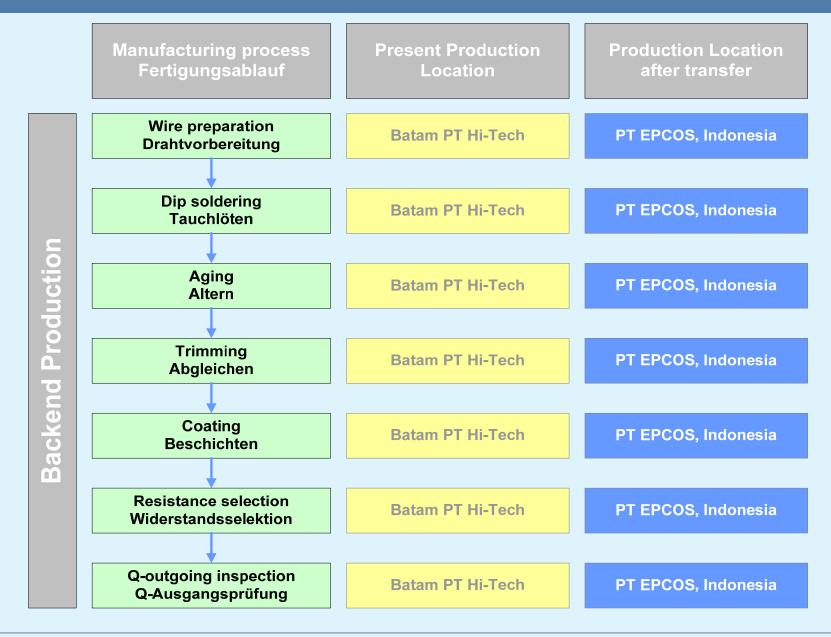
Example: KB plant, Johore Bahru, Malaysia

## Layout



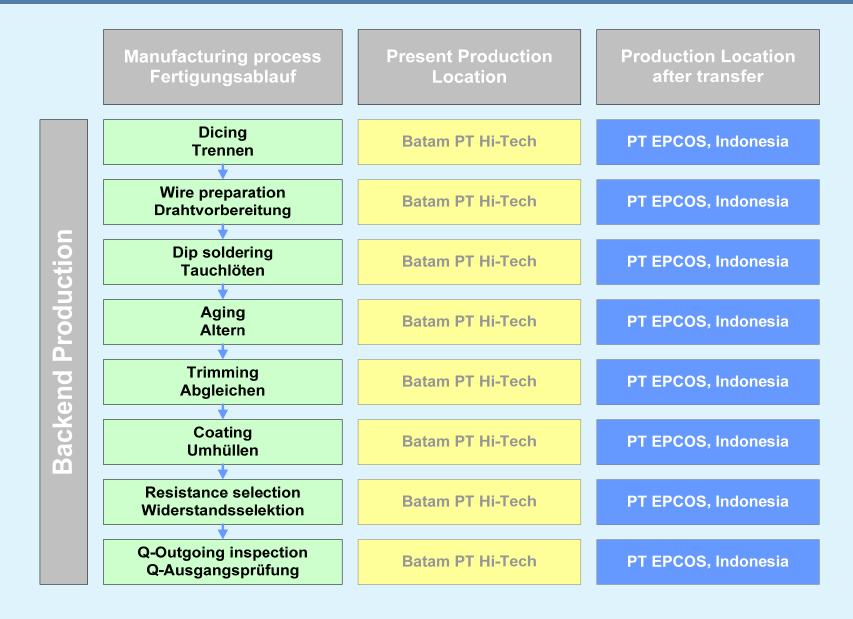


# What will be transferred? Manufacturing process Dip-soldered types: S881, S885, R164, E164





# What will be transferred? Manufacturing process Dip-soldered types: S871, S875





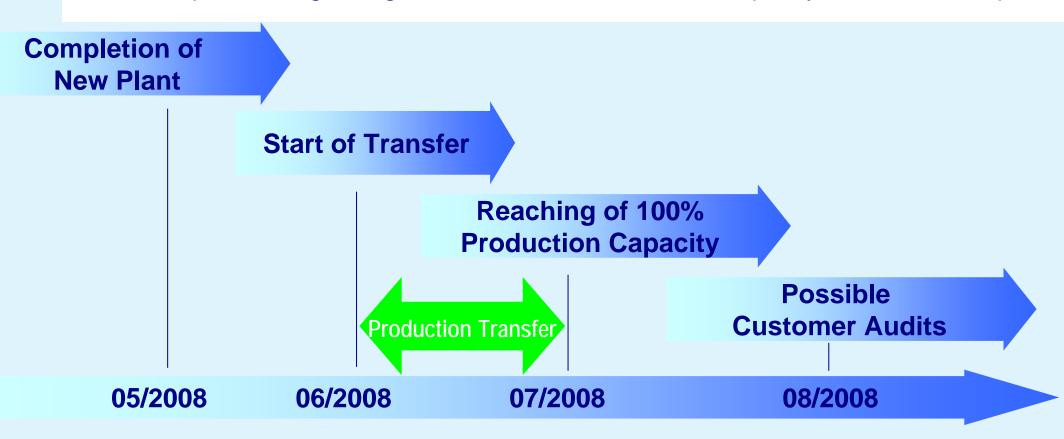
### Reasons and advantages

- Optimized production system and supply chain management
- Implementing the newest technical and quality standards
- Plant is located at highly developed industrial area with advantageous interaction to other fields of industries and suppliers
- Optimal infrastructural connections to international harbours and airports as well as to independent water and power supplies
- Additional space to ensure rising quality and capacity demands



#### **Transfer schedule**

In the period beginning with 06/08 deliveries will be partly from the new plant



The final transfer details will be submitted in March 2008



### Actions to ensure delivery performance

- Partial parallel production at current and new plant
- Stepwise transfer of production lines and capacities
- No process or design changes at the time of transfer and ramp up
- Complete process, equipment, materials and staff (operators and management) will remain the same
- Individual scheduling of transfer buffer stock depending on customer demands and requirements



#### Actions to ensure quality performance

- Test and release procedures for important facilities of infrastructure
- 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
- Supporting the complete production transfer through experience production engineers from European plants



#### **FAQ**

### 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 August 2008 onwards. Timing can be discussed in detail in March 2008.

## How can I distinguish sensors produced in the new plant?

During a defined time period each packing box form the new plant will be clearly marked.

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

We will do internal production release procedures for different product families instead of specific release procedure.

