

2012

Product Catalog



Modules (Sub Systems)

# Thermal Printheads

for Mobile Printers



# Thermal Printheads

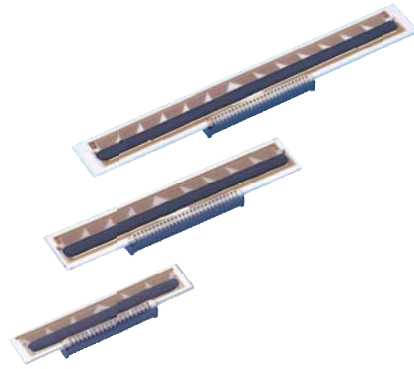
## for Mobile Printers

ROHM provides a lineup of both thick and thin film thermal printheads.

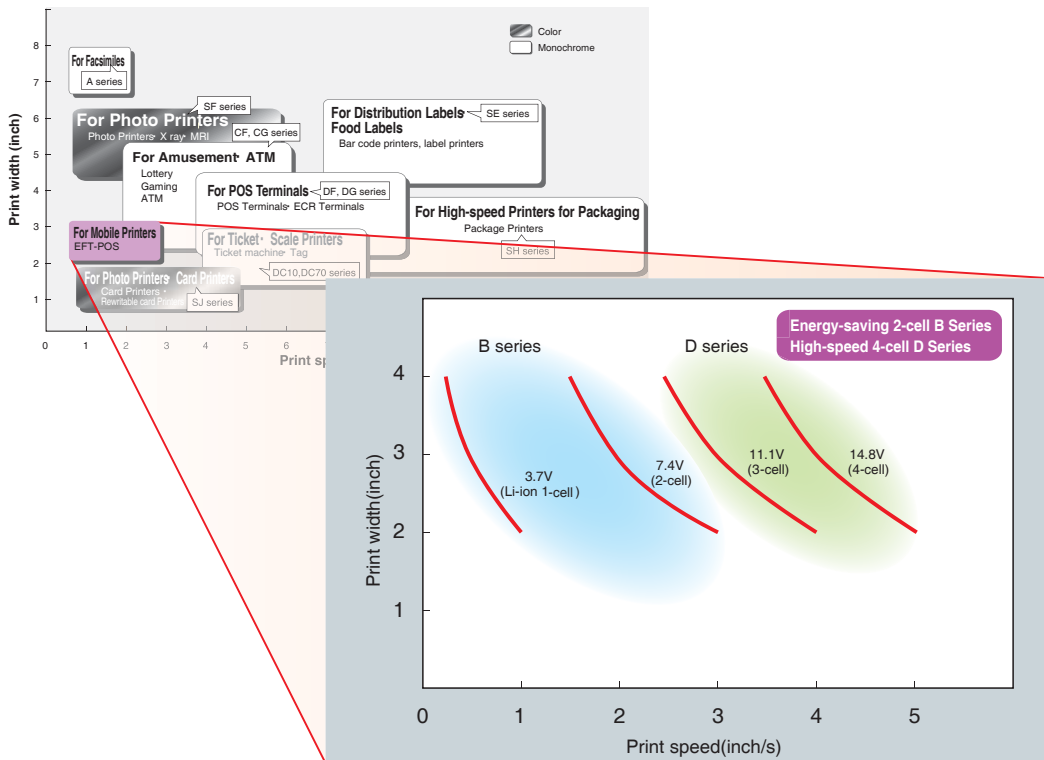
We recommend thick film print heads for mobile printer applications due to their compact size, low weight, and superior reliability.

The effective use of leading-edge LSI mounting technologies contributes to more compact printers while expanding the media transport path sector.

The B and D Series printheads support circuit supply voltages of 2.7V and 3.13V, respectively.

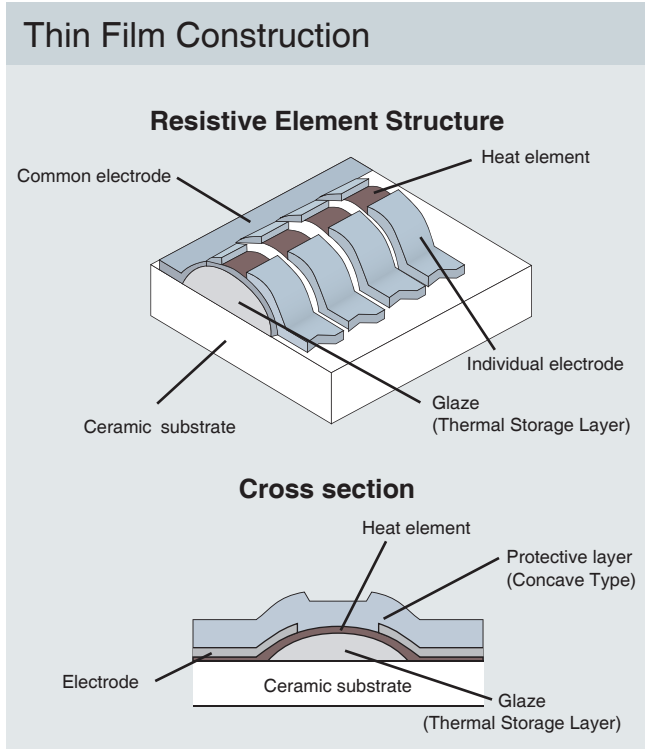


### Applications Map

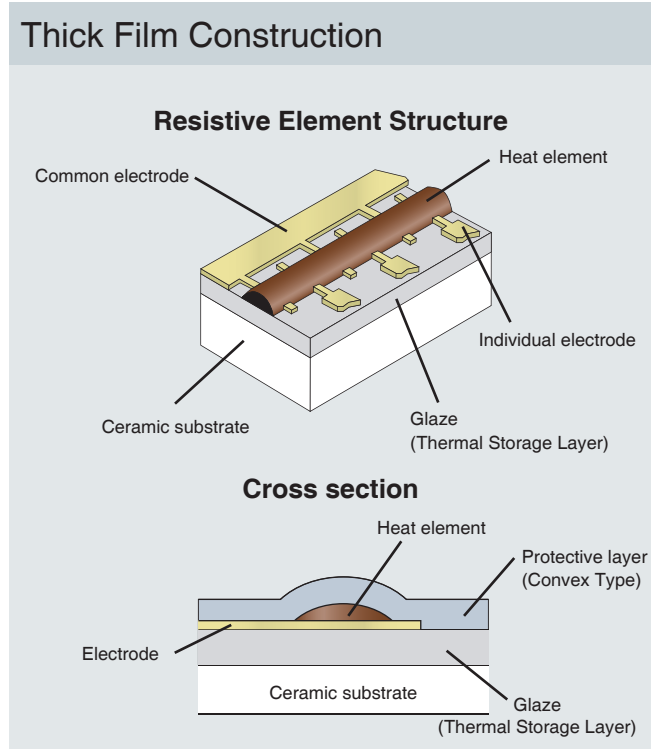


We can develop custom thermal printheads that meet virtually any requirements. Please inquire at your nearest ROHM sales office.

# Thick film construction for increased energy savings, resulting in longer battery life.



Thermal printhead manufactured using the vacuum sputtering method.



Thermal printhead manufactured using the screen printing method.

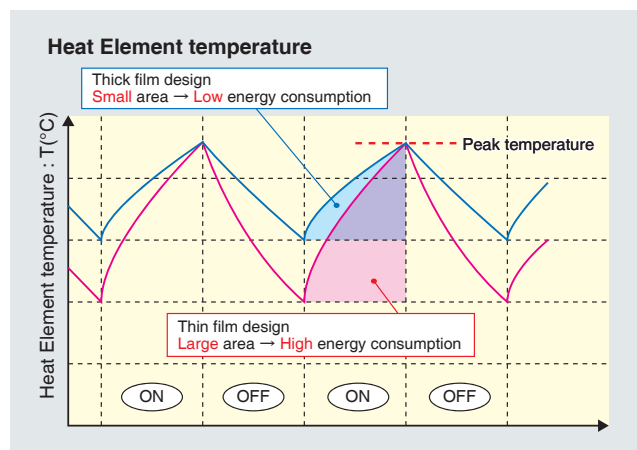
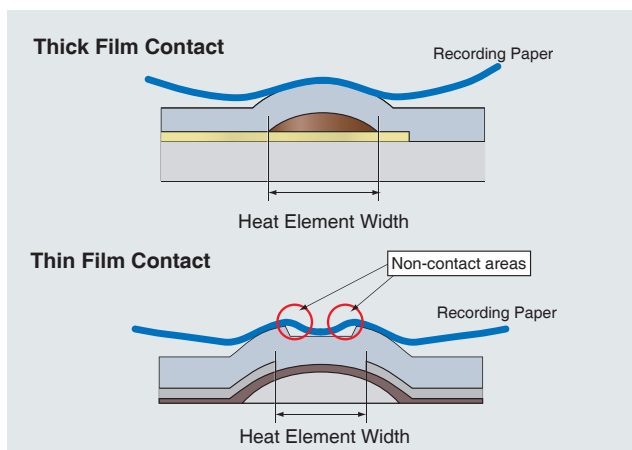
## High energy efficiency thick film thermal printheads

### Contact will differ based on the type of resistive element construction

The convex shape of thick film printheads provides better contact with print media than thin film types. Contact occurs over the entire area of the resistive element width, resulting in high transfer efficiency. This advantage is especially evident with thick media.

### Energy consumption differs based on glaze shape

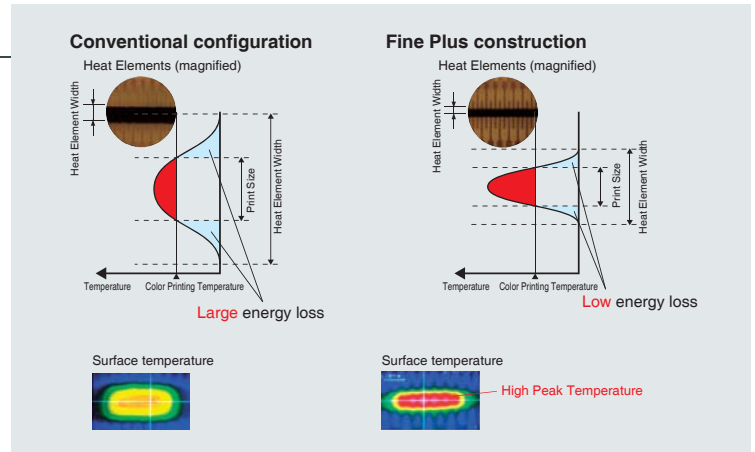
Thick film design utilizes a full surface glaze with large heat capacity. Heat dissipation is slow, making it possible to use the residual heat for the next printing. This results in greater energy savings during low speed operation.



# Further energy savings with Fine Plus construction featuring high heat-dissipation characteristics

## What is Fine Plus construction?

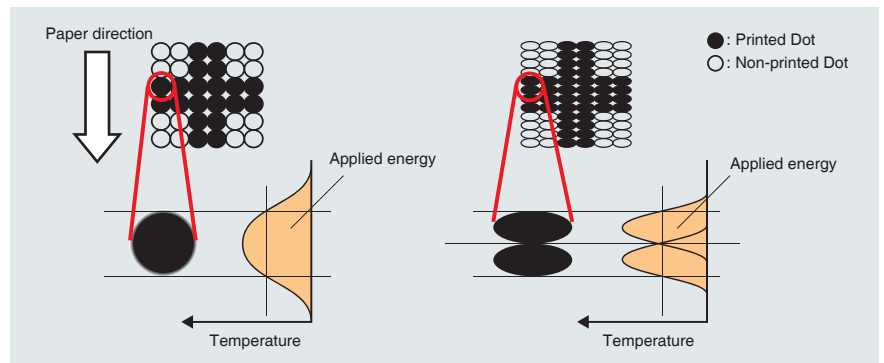
Fine Plus construction features a narrower heat element width in the vertical scan direction compared to conventional configurations. The volume of heat generated per unit area is greater at a given supply voltage. This results in higher peak temperature and makes higher density printing possible (temperatures required for color printing are possible even at low power supply levels).



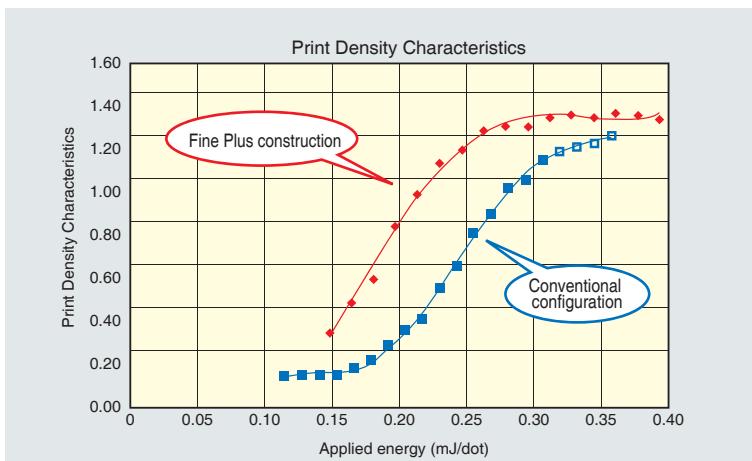
## Fine Plus construction for greater energy control

### Double dot printing

With Fine Plus construction each dot is printed twice, increasing energy savings. The total energy required for one dot is smaller compared to conventional units. This product can also be configured to print each dot once.



### Print Density Characteristics



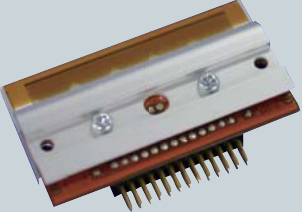
The total supplied energy is smaller.

# Compact, lightweight, high reliability thermal printheads

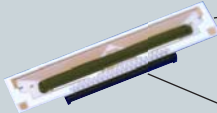
ROHM's thermal printheads provide complete printing capability on a single substrate for superior reliability. The ceramic used features less warping due to temperature changes and superior heat dissipation characteristics. In addition, only one type of clip connector is used, regardless of print width, enabling use of a common control interface.

ROHM's compact, lightweight, high reliability thermal printheads are ideal for mobile printer applications.

**Conventional configuration**



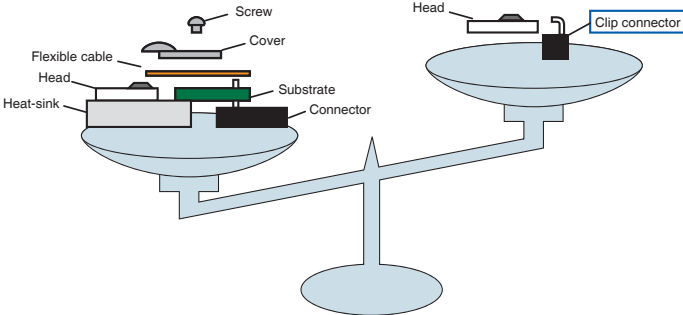
**G Type Construction**



**Compact • Lightweight • High Reliability**

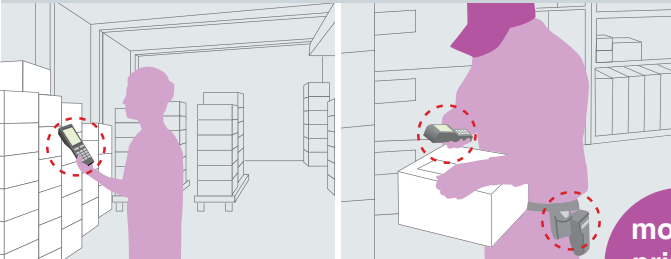
- Ceramic substrate**
  - Little warping due to temperature changes
  - Superior heat dissipation
  - Integrated print functionality
- Clip connector** ROHM Patent
  - Common control board interface regardless of print width
  - Compatible with readily available general purpose FFCs

\*Flexible Flat Cable

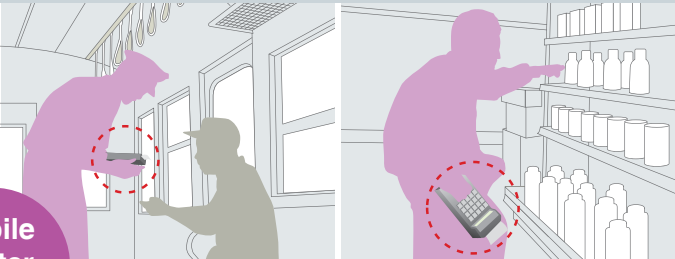


## Active in a variety of mobile printer markets

**Distribution and warehousing** [express delivery and inventory control]

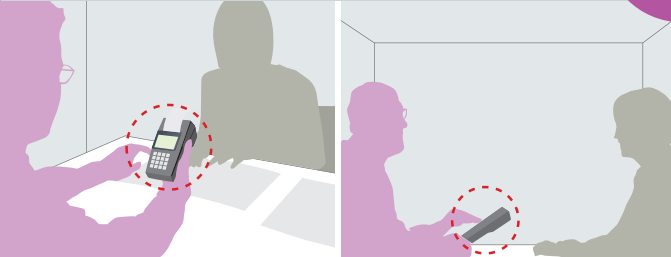


**Retail sales** [express delivery and inventory control]

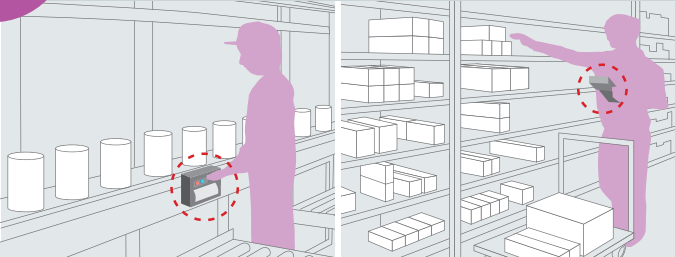


**mobile printer markets**

**Financial and insurance industries** [spot estimates and settlements]



**Manufacturing** [inspection management and inventory taking]



# Product specifications

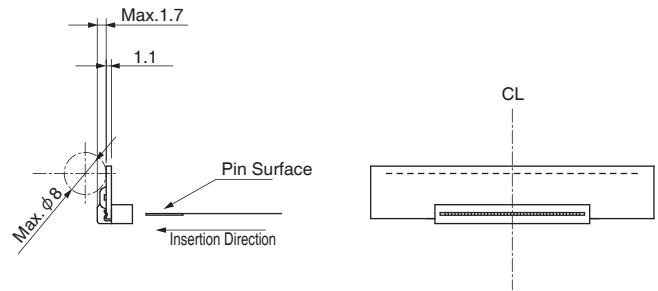
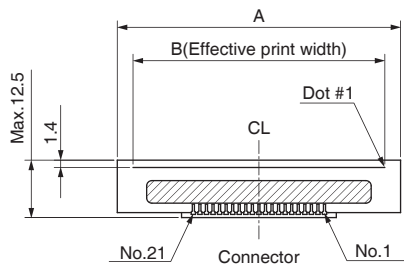
## ■ B series (Capable of logic voltage as Low as 2.7V)

Part No.	Resolutions (dpi)	Print Width (mm)	Number of dot (dots)	Resistance Tolerance ( $\Omega$ )	Resistance Variation	Platen Diameter Max. (mm)	Print Speed (mm/s)	Logic Voltage (V)	Supply Voltage (V)	Connector Type	Heat Sink	Abrasion Life (km)	Pulse Life (pulses)
<b>KA2002-BE10A</b>	203	48	384	176	$\pm 4\%$	8	25 to 100	2.7 to 5.25	3.13 to 8.5	21pin (FFC)	None	50	50 million
<b>KA2002-BE13A</b>	203	48	384	176	$\pm 4\%$	14	25 to 100	2.7 to 5.25	3.13 to 8.5	28pin (FFC)	None*	50	50 million
<b>KA2003-BE51A</b>	203	72	576	176	$\pm 4\%$	14	25 to 100	2.7 to 5.25	3.13 to 8.5	28pin (FFC)	None*	50	50 million
<b>KA2004-BE51A</b>	203	104	832	176	$\pm 4\%$	14	25 to 100	2.7 to 5.25	3.13 to 8.5	28pin (FFC)	None*	50	50 million

\* Standard heat-sink an option.

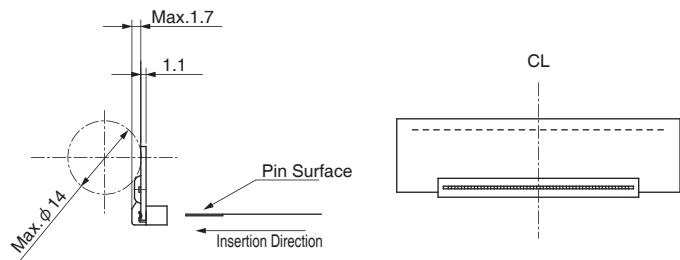
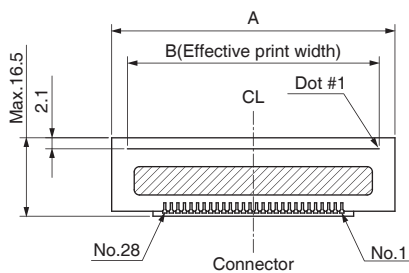
## Dimensions (Unit : mm)

### KA2002-BE10A



Part No.	A	B
<b>KA2002-BE10A</b>	54	48

### KA2002-BE13A KA2003-BE51A KA2004-BE51A



Part No.	A	B
<b>KA2002-BE10A</b>	54	48
<b>KA2003-BE10A</b>	80	72
<b>KA2004-BE10A</b>	117	104

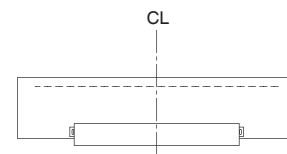
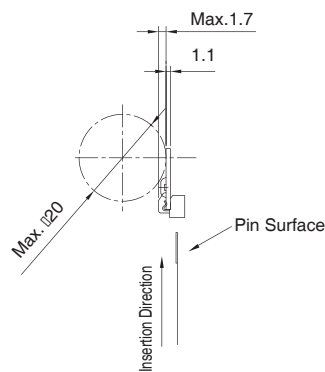
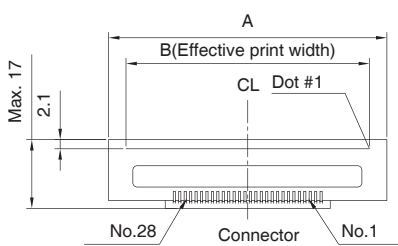
■ D series (Capable of logic voltage as Low as 3.3V)

Part No.	Resolutions (dpi)	Print Width (mm)	Number of dot (dots)	Resistance Tolerance ( $\Omega$ )	Resistance Variation	Platen Diameter Max. (mm)	Print Speed (mm/s)	Logic Voltage (V)	Supply Voltage (V)	Connector Type	Heat Sink	Abrasion Life (km)	Pulse Life (pulses)
<b>KA2002-DE60A</b>	203	56	448	350	$\pm 3\%$	20	50 to 150	3.13 to 5.25	8.5 to 14.8	28pin (FFC)	None*	50	50 million
<b>KA2003-DE60A</b>	203	80	640	350	$\pm 3\%$	20	50 to 150	3.13 to 5.25	8.5 to 14.8	28pin (FFC)	None*	50	50 million
<b>KA2004-DE60A</b>	203	104	832	350	$\pm 3\%$	20	50 to 150	3.13 to 5.25	8.5 to 14.8	28pin (FFC)	None*	50	50 million

\* Standard heat-sink an option.

## Dimensions (Unit : mm)

KA2002-DE60A  
 KA2003-DE60A  
 KA2004-DE60A



Part No.	A	B
<b>KA2002-DE60A</b>	64	56
<b>KA2003-DE60A</b>	88	80
<b>KA2004-DE60A</b>	117	104

For dimension tolerances, please refer to the detailed specifications.

The content specified in this document is correct as of November, 2011.

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<b>Detroit</b> +1-248-348-9920	<b>Espoo</b> +358 400 222 382	<b>Shenzhen</b> +86-755-8307-3008	<b>Yokohama</b> +81-45-476-2121
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