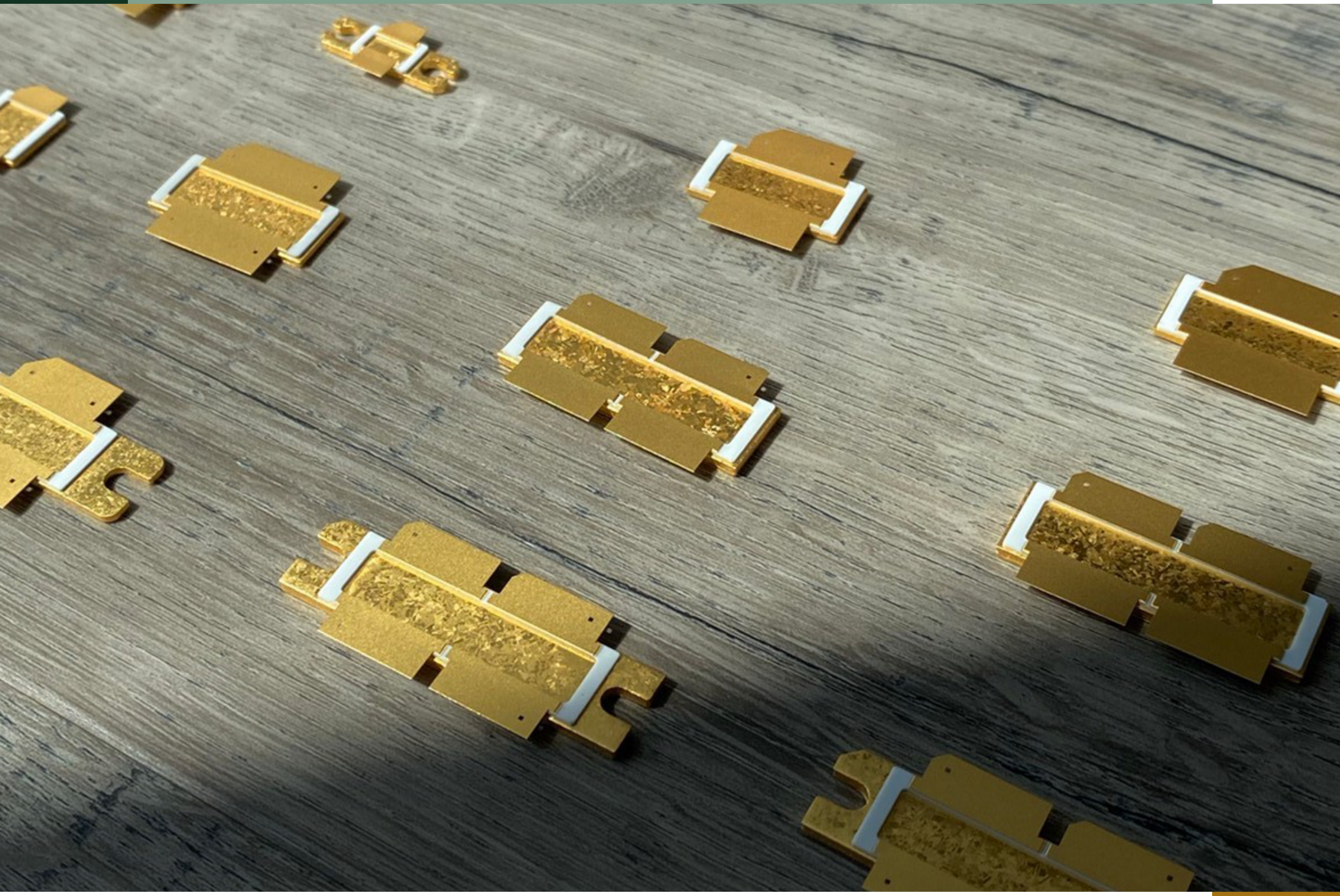
High Power Assembly Great Performance

Eltrix

2023 issue

CERAMIC RF PACKAGE DATASHEET

Eltrix is pursuing to be one of the world's reliable solution providers for RF IC assembly products. Using our portfolio of products and services to meet our customer's satisfaction.
We provide not only assembly materials, but also air cavity and assembly service . To make sure our customers have comprehensive assistance to their needs.



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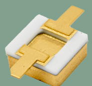
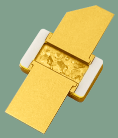
220-260 W/m.K

KRFP051041-2
Ceramic Ring
Thermal Conductivity
290-310 W/m.K

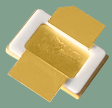


MRFP050040
Ceramic Ring
Thermal Conductivity
180-220 W/m.K



KRFP092058
Ceramic Ring
Thermal Conductivity
220-260 W/m.K

KRFP092058-2
Kovar Ring
Thermal Conductivity
290-310 W/m.K



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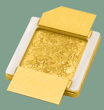
Thermal Conductivity
180-220 W/m.K



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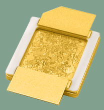
Ceramic Ring
Thermal Conductivity
220-260 W/m.K



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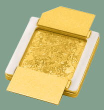
Kovar Ring
Thermal Conductivity
290-310 W/m.K
(Lead Thickness - 0.13mm)

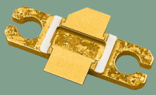


KRFP099099-3
Kovar Ring
Thermal Conductivity
290-310 W/m.K
(Lead Thickness - 0.11mm)

KRFP140038
Ceramic Ring
Thermal Conductivity
220-260 W/m.K

KRFP140041
Ceramic Ring
Thermal Conductivity
290-310 W/m.K

KRFP166146
Kovar Lid
Thermal Conductivity
290-310 W/m.K



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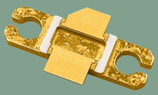
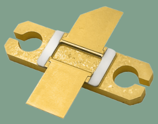
Ceramic Ring
Thermal Conductivity
220-260 W/m.K



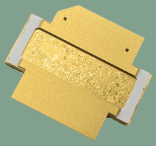
KRFP203058-2
Ceramic Ring
Thermal Conductivity
290-310 W/m.K



MRFP203058-62
Ceramic Ring
Thermal Conductivity
180-220 W/m.K

KRFP203099
Ceramic Ring
Thermal Conductivity
220-260 W/m.K

KRFP203099-2
Kovar Ring
Thermal Conductivity
290-310 W/m.K



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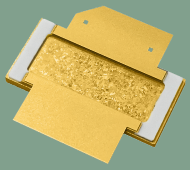
Ceramic Ring
Thermal Conductivity
220-260 W/m.K



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Ceramic Ring
Thermal Conductivity
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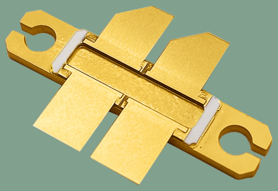
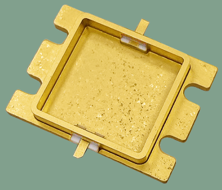


MRFP289058
Kovar Ring
Thermal Conductivity
220-260 W/m.K



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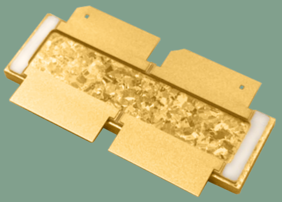
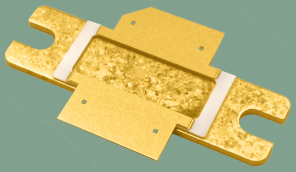
Ceramic Ring
Thermal Conductivity
220-260 W/m.K



KRFP322101
Kovar Ring
Thermal Conductivity
220-260 W/m.K



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Ceramic Ring
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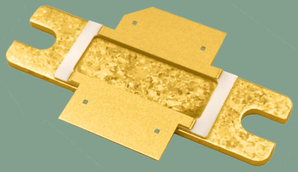

KRFP340097-2
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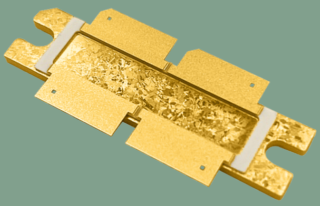
Thermal Conductivity
220-260 W/m.K

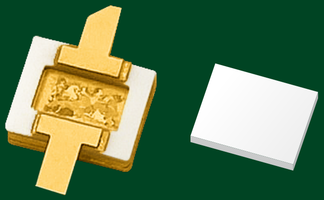


KRFP411094
Ceramic Ring
Thermal Conductivity
220-260 W/m.K

Eltrix

KRFP051041

High Power,
Metal Ceramic RF Package



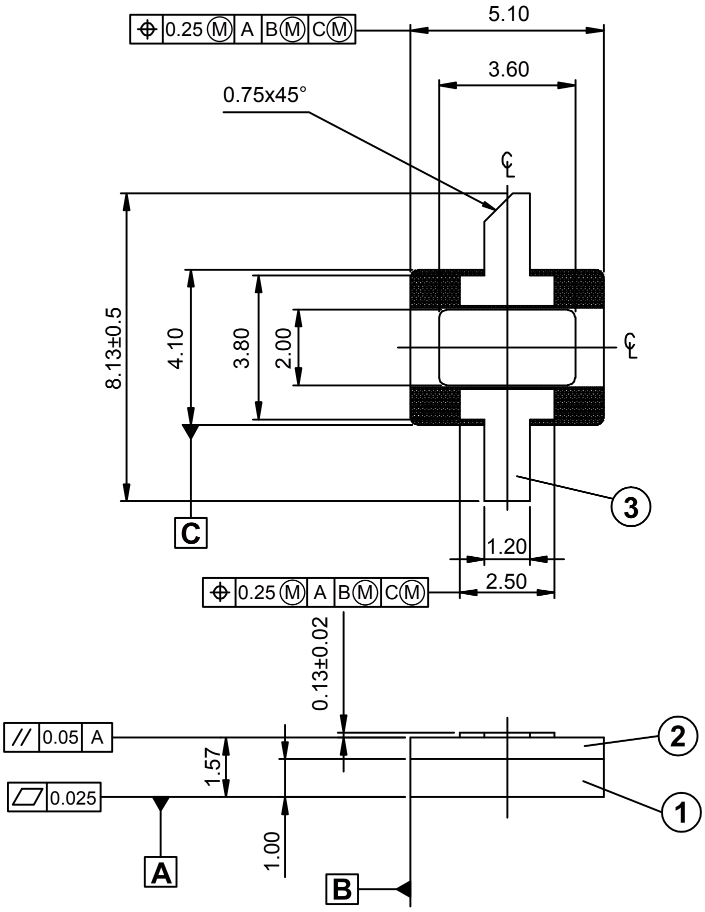
2022 issue

Feature –
The KRFP051041 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability. The KRFP051041 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Feature	Description
Frequency Band	S, C, X
Inner Dimension	3.6*2mm
Outer Dimension	5.1*4*1mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base

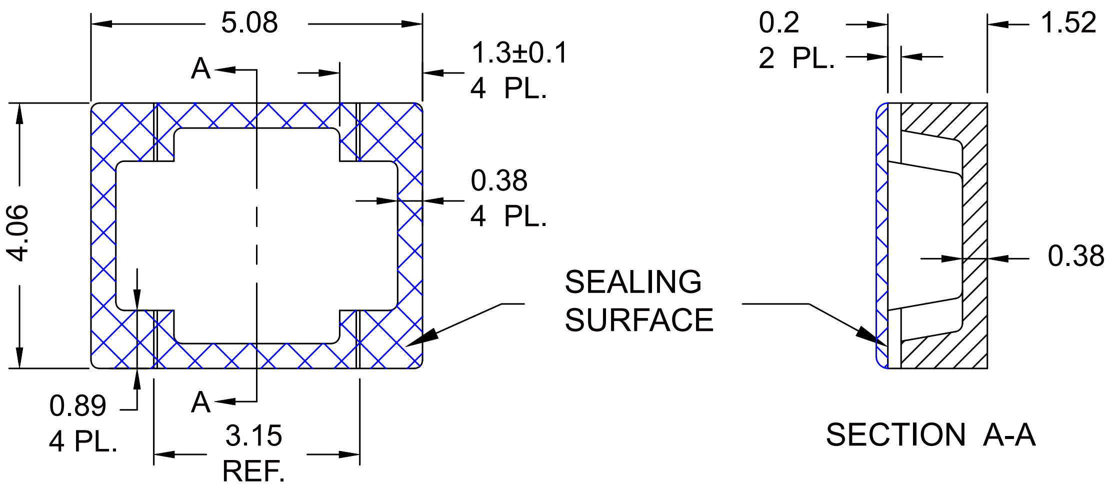


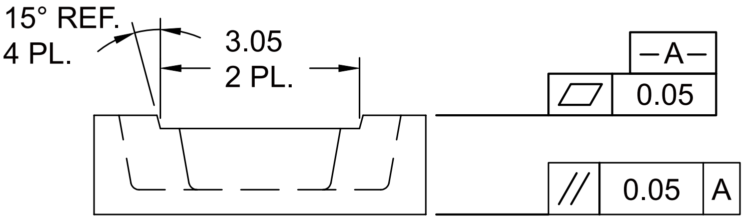
PLATING

NO.	Au	Nico (Co content:8~40%)
01	2.5µm MIN	2.5µm MIN
02	1.0µm MIN	2.5µm MIN

3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	ELFLANGE	CPC
NO.	**PART NAME**	**MATERIAL**

Lid - SLID050040





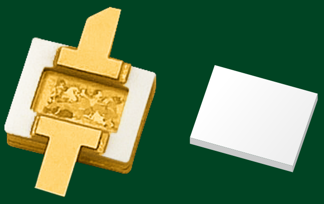
NOTE

1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm

Eltrix

KRFP051041-2

High Power,
Metal Ceramic RF Package



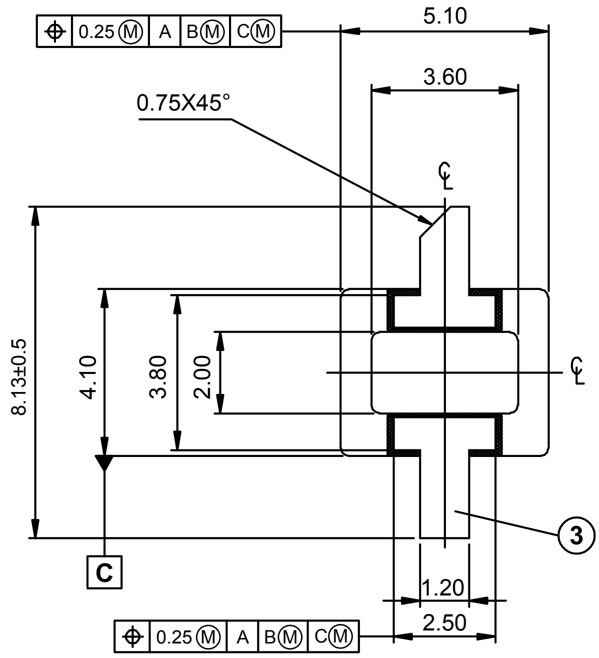
2022 issue

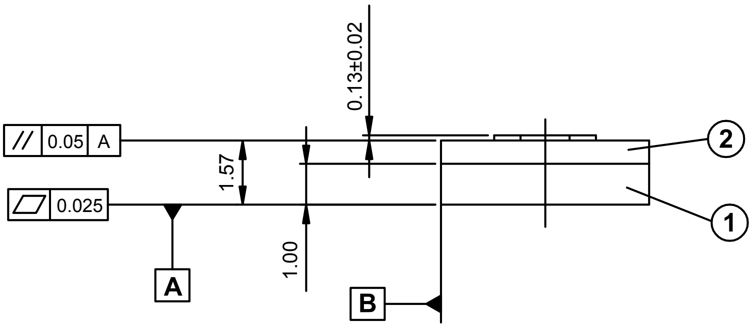
The KRFP051041-2 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability. The KRFP051041-2 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Feature	Description
Frequency Band	S, C, X
Inner Dimension	3.6*2mm
Outer Dimension	5.1*4*1mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base



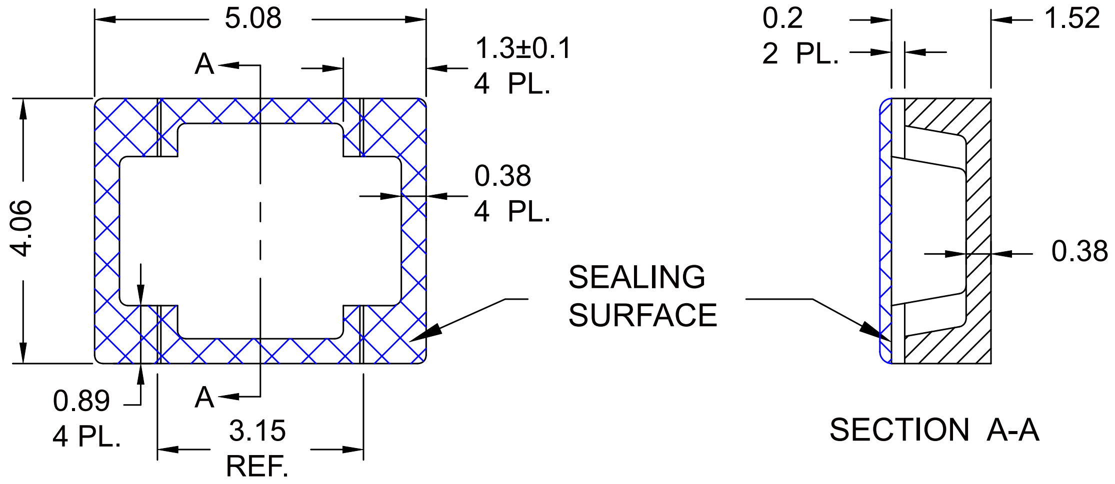


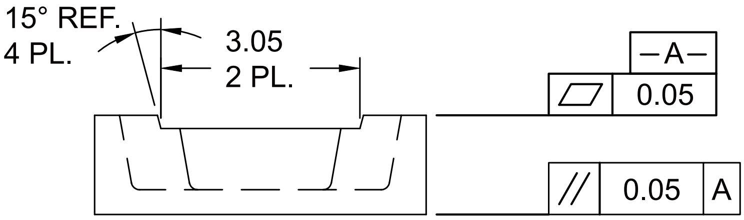
PLATING

- Ni-Co: 2.54μm Min(Co Weight Percent: 8~40%)
- Pd: 0.12~0.5μm
- Au: 0.2μm Min

3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	EL FLANGE	S-CMC12.8%
NO.	**PART NAME**	**MATERIAL**

Lid - SLID050040



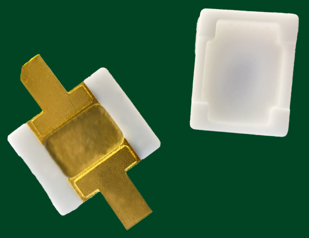


NOTE

1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm

MRFP050040

Ceramic
Air Cavity Package



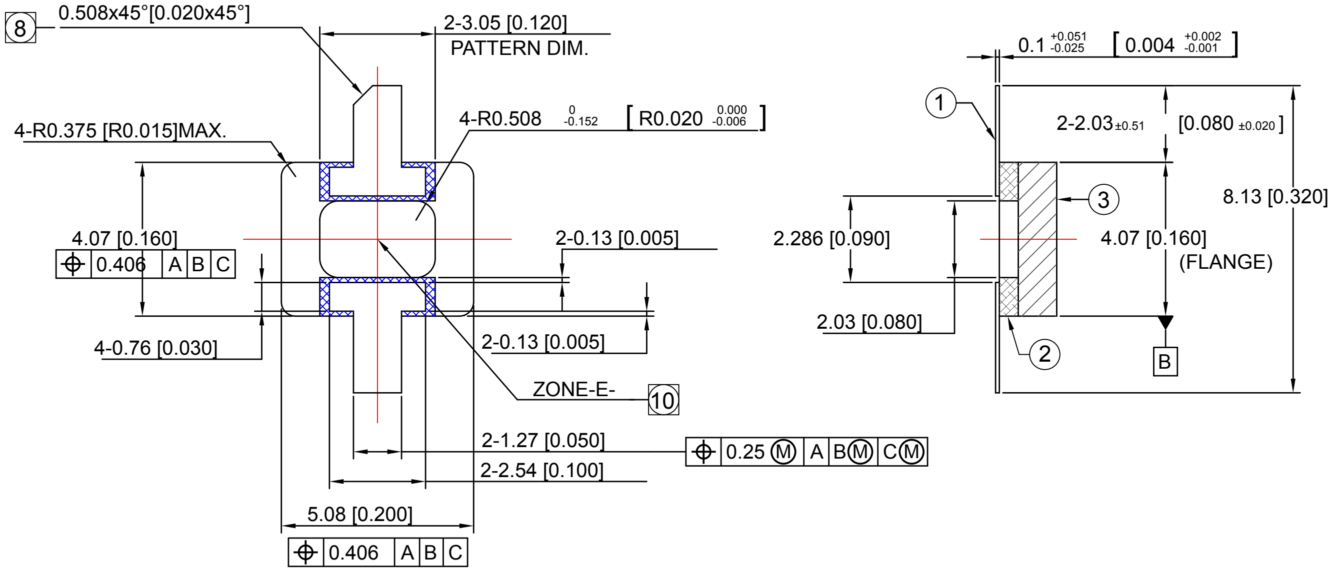
2022 issue

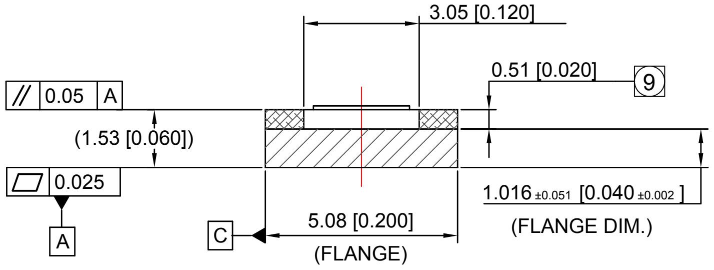
The MRFP050040 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability. The MRFP050040 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	3.05*2.03 mm
Outer Dimension	5.08*4.07mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

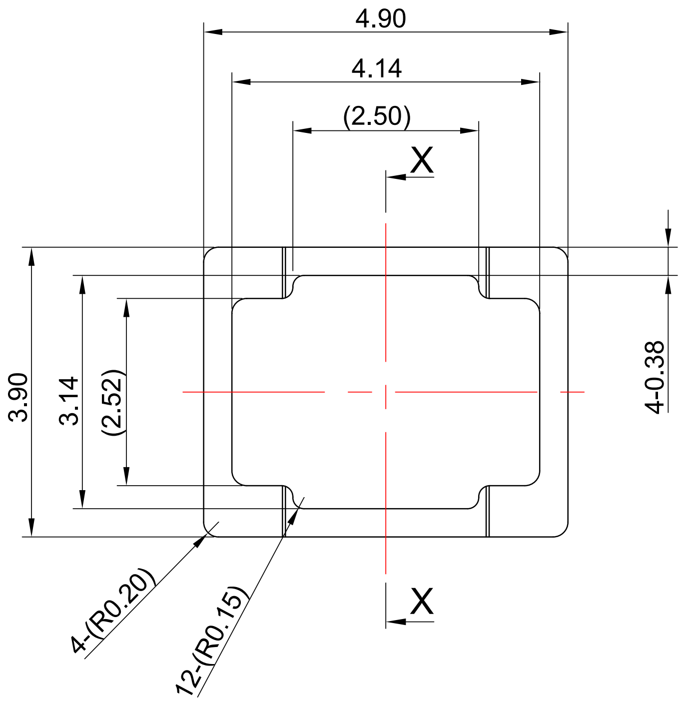
Base

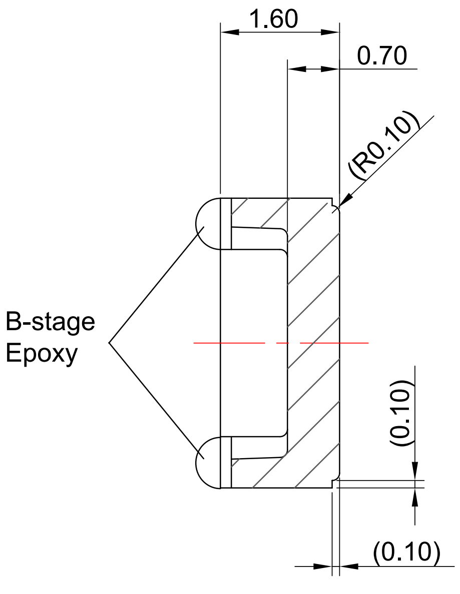




1	LEAD	2	Alloy42
2	CERAMIC	1	Al_2O_3 92% MIN
3	FLANGE	1	CMC(1:1:1)
NO.	**PART NAME**	**Q'TY**	**MATERIAL**

Lid - SLID049039





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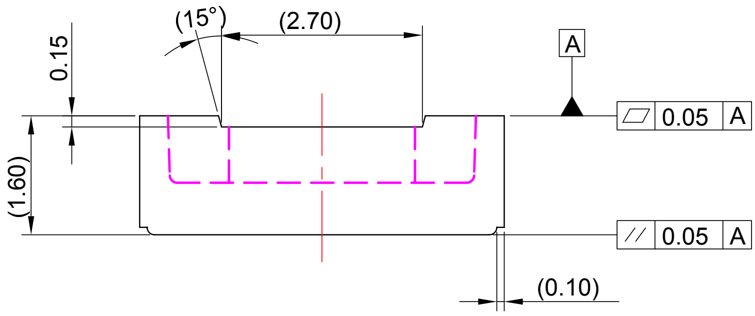
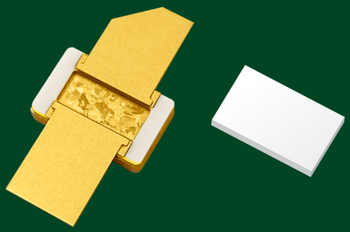


Eltrix

KRFP092058

High Power,
Metal Ceramic RF Package



2022 issue

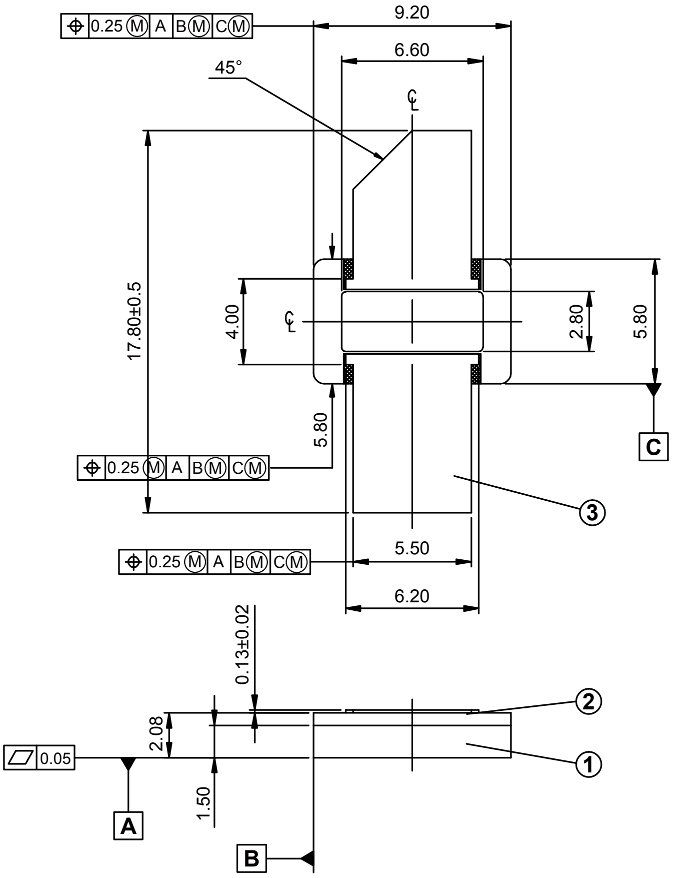
The KRFP092058 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

The KRFP092058 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	6.6*2.8 mm
Outer Dimension	9.2*5.8 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base

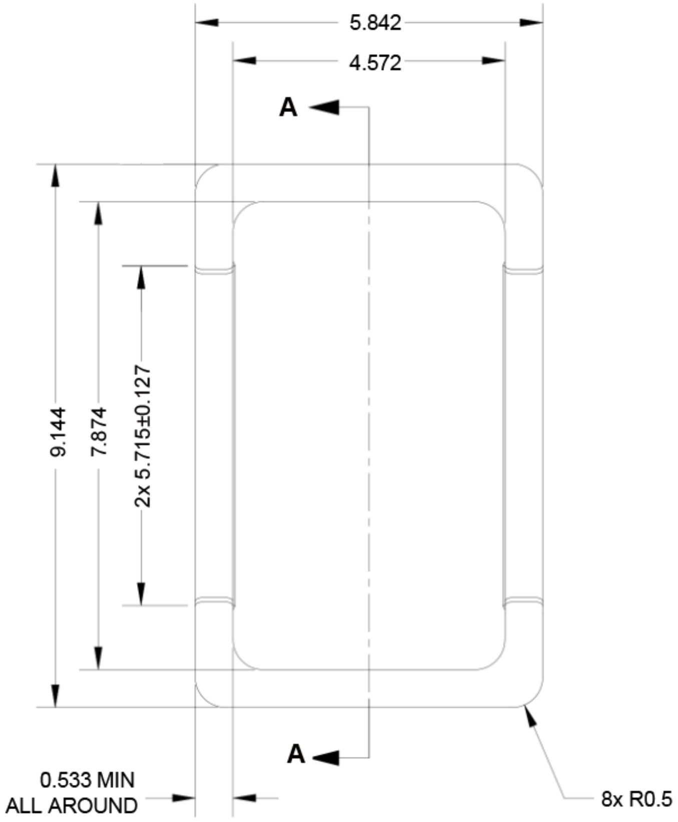


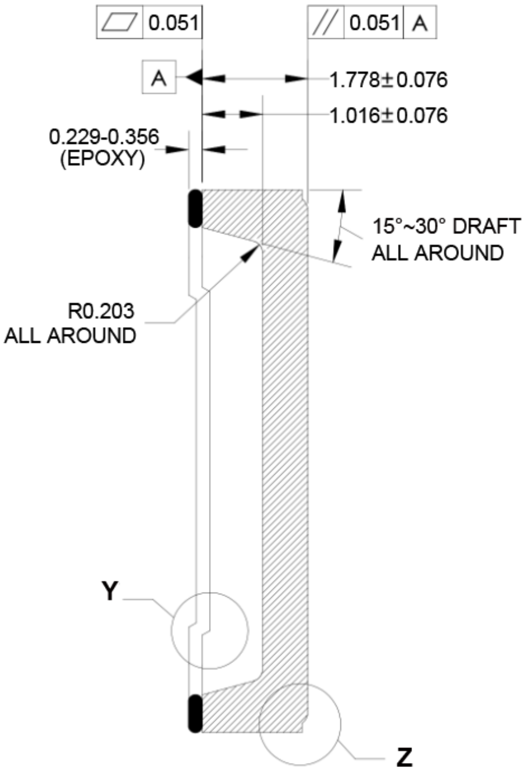
PLATING

NO.	Au	Nico (Co content:8~40%)
01	2.5μm MIN	2.5μm MIN
02	1.0μm MIN	2.5μm MIN

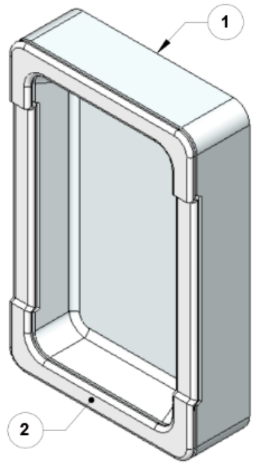
3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	FLANGE	CPC
NO.	**PART NAME**	**MATERIAL**

Lid - SLID091058

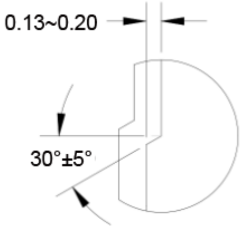




SECTION A-A



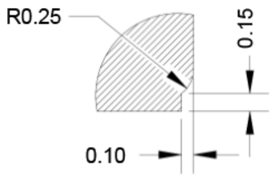
ISOMETRIC VIEW



DETAIL Y

NOTE

1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm



DETAIL Z (OPTIONAL)

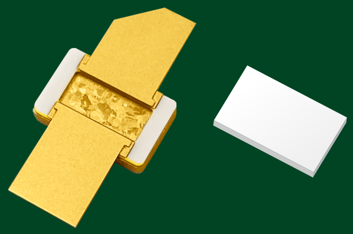
NO.	QTY	DESCRIPTION
1	1	White Ceramic Lid
2	A/R	B-stage Expoxy(RJ4B)

Eltrix is pursuing to be one of world's reliable provider of MMIC and RF products.Using our portfolio of products and services to meet our customer's satisfaction, we seek to develop the most reliable, innovative and practical MMIC solution to you.

Eltrix

KRFP092058-2

High Power,
Metal Ceramic RF Package



2022 issue

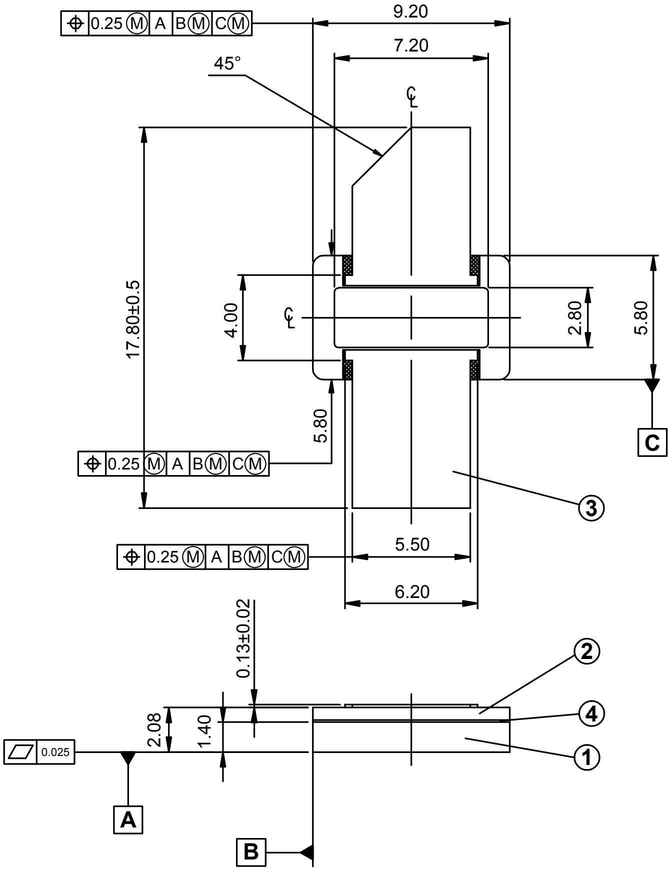
The KRFP092058-2 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

The KRFP092058-2 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	7.2*2.8 mm
Outer Dimension	9.2*5.8 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

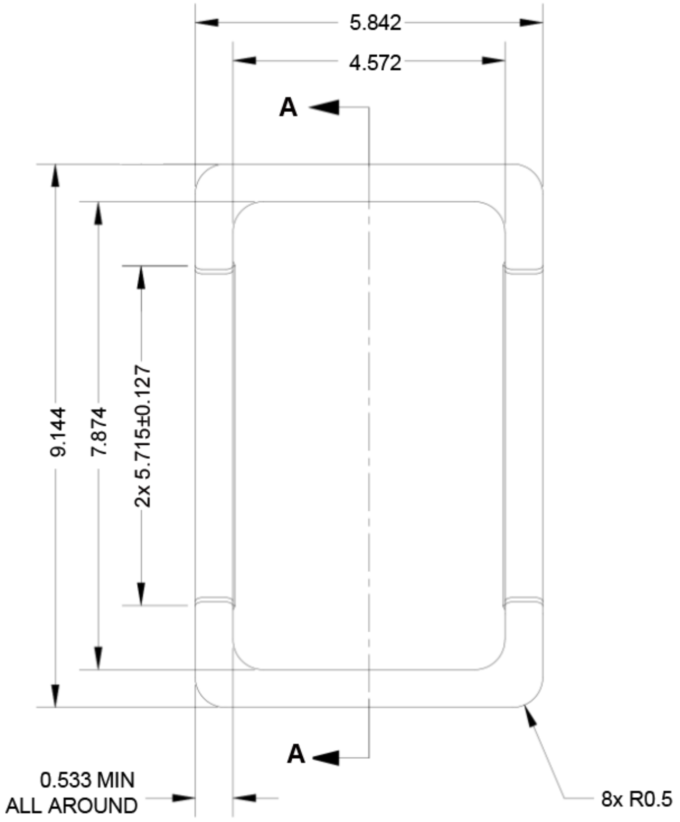
Base

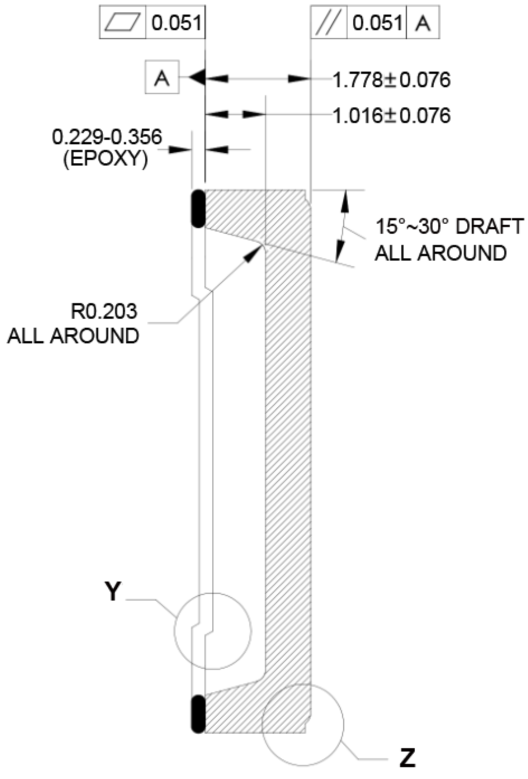


PLATING
- Ni-Co: 2.54μm Min
  (Co Weight Percent: 8~40%)
- Pd: 0.12~0.5μm
- Au: 0.2μm Min

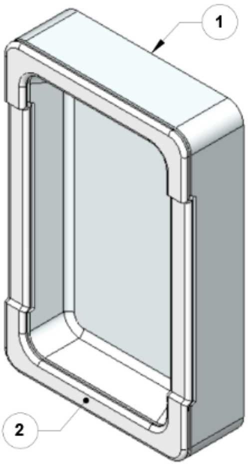
NO.	PART NAME	MATERIAL
4	KOVAR RING	KOVAR 0.1T
3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	FLANGE	S-CMC 12.8%

Lid - SLID091058

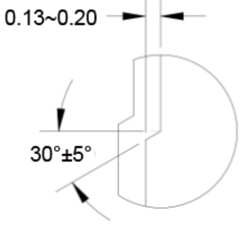




SECTION A-A



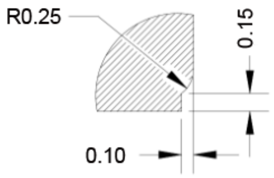
ISOMETRIC VIEW



DETAIL Y

NOTE

1. MATERIAL
   - 1-1 White Ceramic Al_2O_3 96%
   - 1-2 B-staged Epoxy 0.15~ 0.25 mm



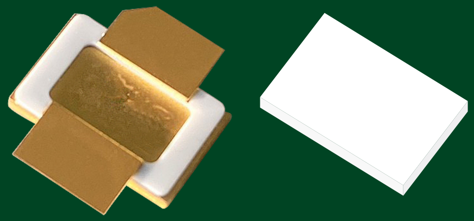
DETAIL Z (OPTIONAL)

NO.	QTY	DESCRIPTION
1	1	White Ceramic Lid
2	A/R	B-stage Expoxy(RJ4B)

Eltrix

MRFP096058

Ceramic
Air Cavity Package



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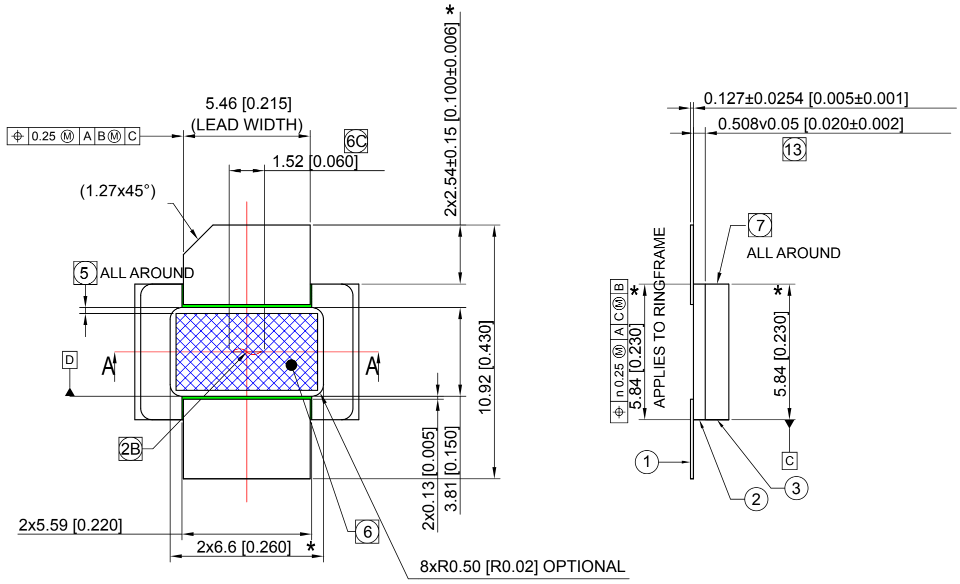
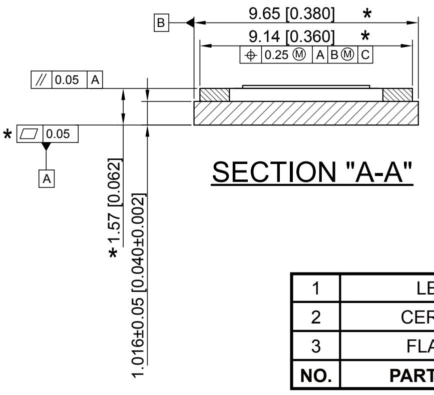
The MRFP096058 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability. The MRFP096058 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	6.6*3.81 mm
Outer Dimension	9.65*5.84mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

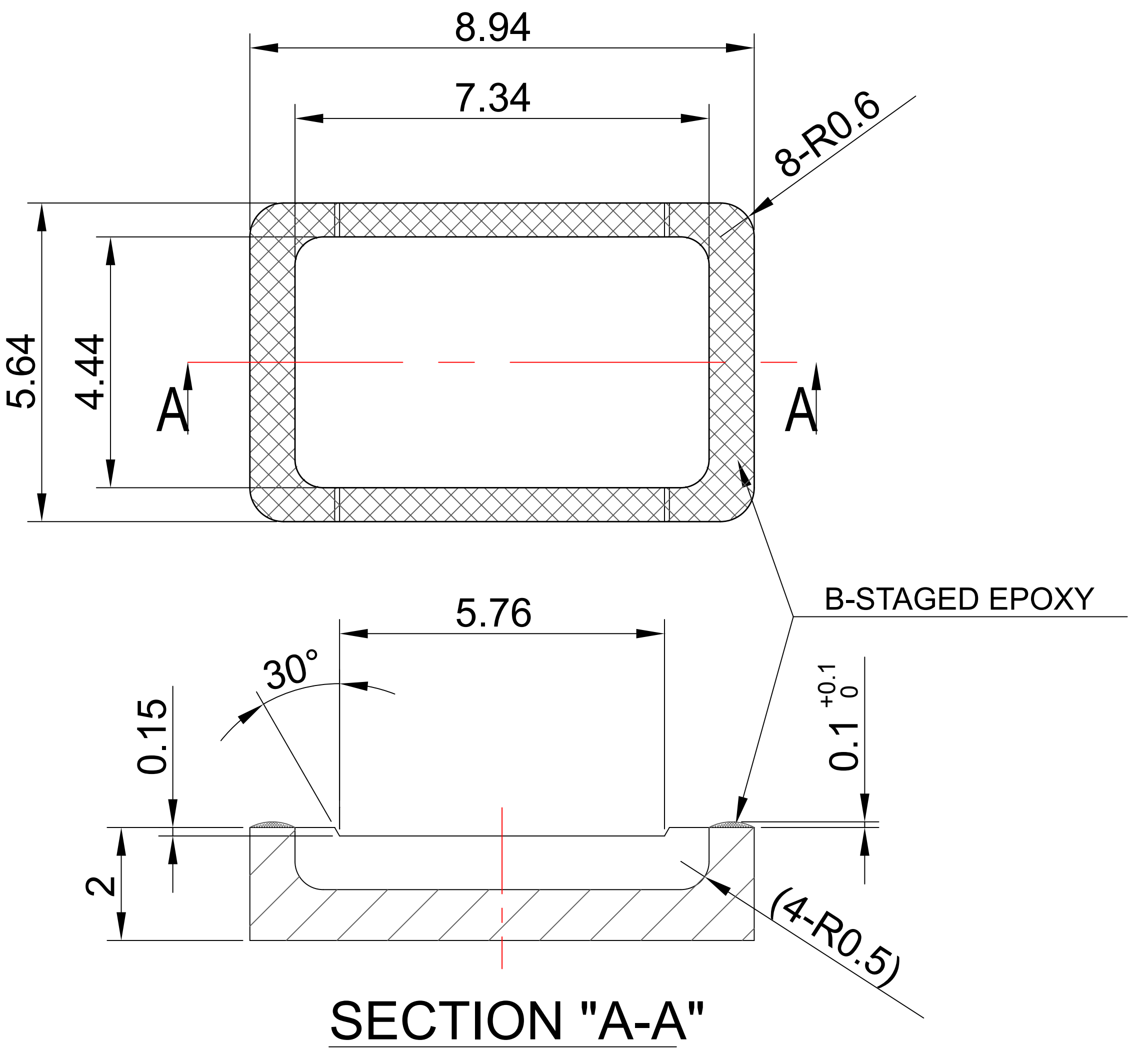
Base





1	LEAD	2	Alloy42
2	CERAMIC	1	Al_2O_3 92% MIN
3	FLANGE	1	CMC(1:1:1)
NO.	**PART NAME**	**QTY**	**MATERIAL**

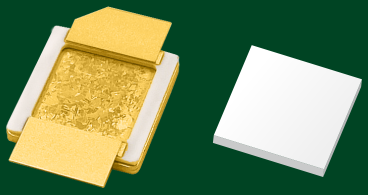
Lid - SLID089056



Eltrix is pursuing to be one of world's reliable provider of MMIC and RF products.Using our portfolio of products and services to meet our customer's satisfaction, we seek to develop the most reliable, innovative and practical MMIC solution to you.

KRFP099099

High Power,
Metal Ceramic RF Package



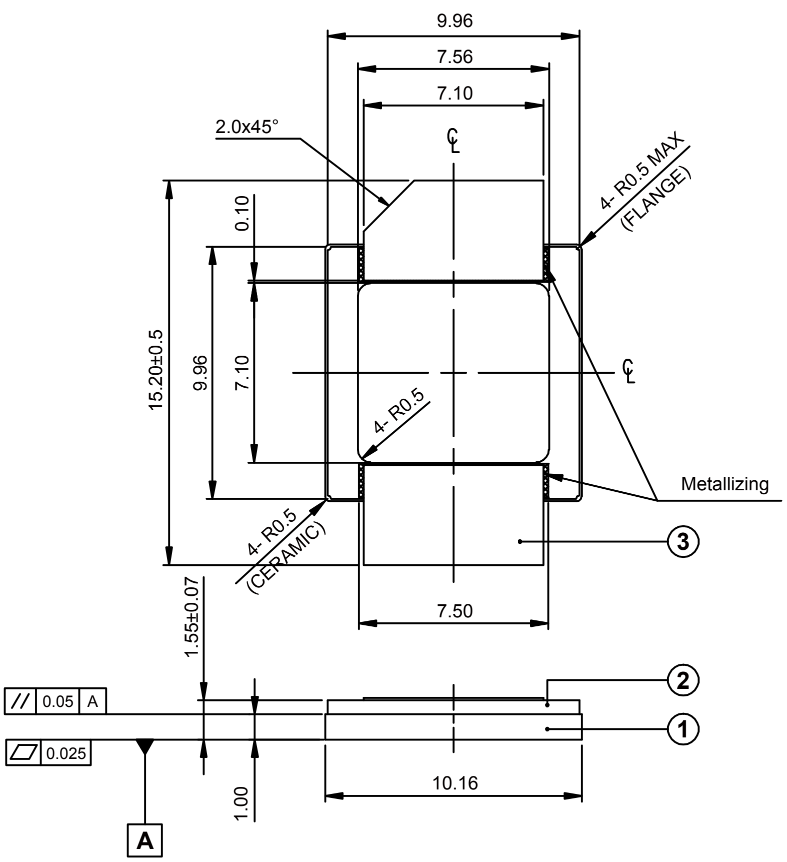
The KRFP099099 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

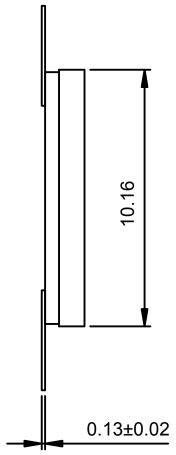
The KRFP099099 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	7.56*7.1 mm
Outer Dimension	9.96*9.96 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base



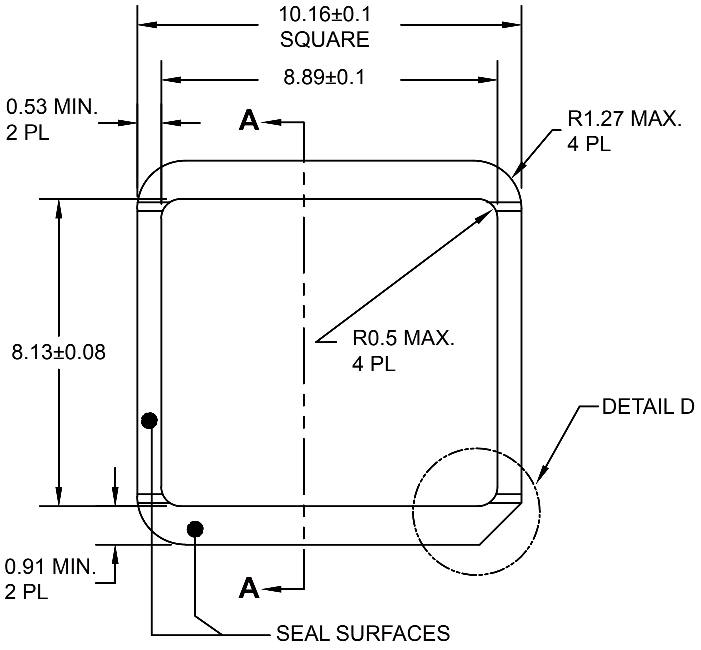


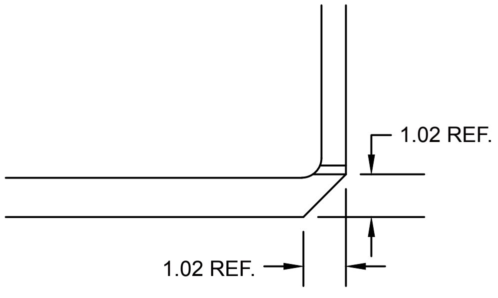
PLATING

NO.	Au	Nico (Co content:8~40%)
01	2.5μm MIN	2.5μm MIN
02	1.0μm MIN	2.5μm MIN

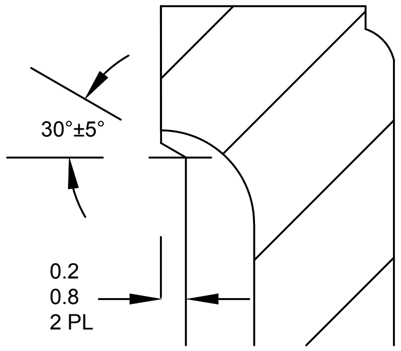
3	LEAD FRAME	Alloy42
2	CERAMIC RING	Al_2O_3
1	FLANGE	CPC(1:4:1)
NO.	**PART NAME**	**MATERIAL**

Lid - SLID101101

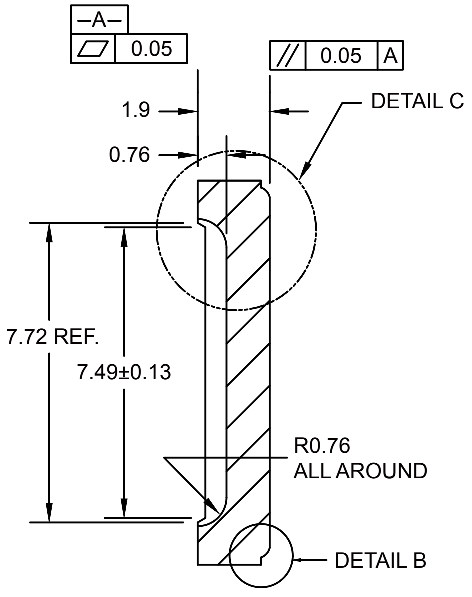




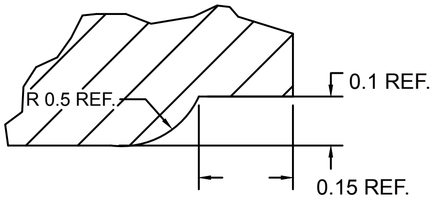
DETAIL D



DETAIL C



SECTION A-A



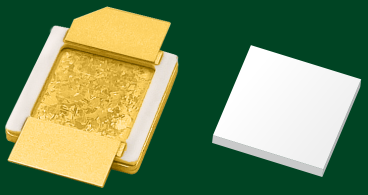
DETAIL B
ALL AROUND

NOTE
1. MATERIAL
  1-1 White Ceramic Al_2O_3 96%
  1-2 B-staged Epoxy 0.15~ 0.25 mm
2. Epoxy applied 0.18 / 0.36 onto seal surfaces

Eltrix

KRFP099099-2

High Power,
Metal Ceramic RF Package



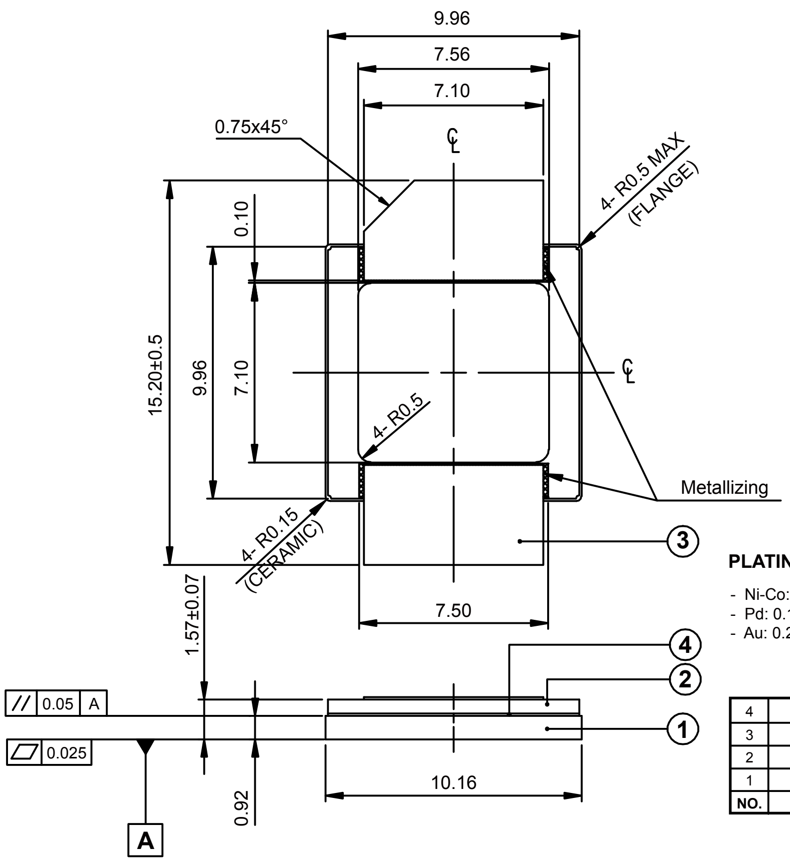
The KRFP099099-2 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

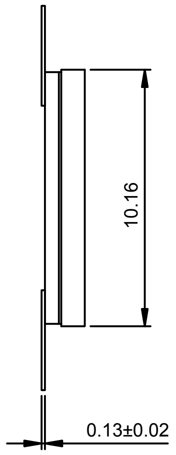
The KRFP099099-2 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	7.56*7.1 mm
Outer Dimension	9.96*9.96 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base



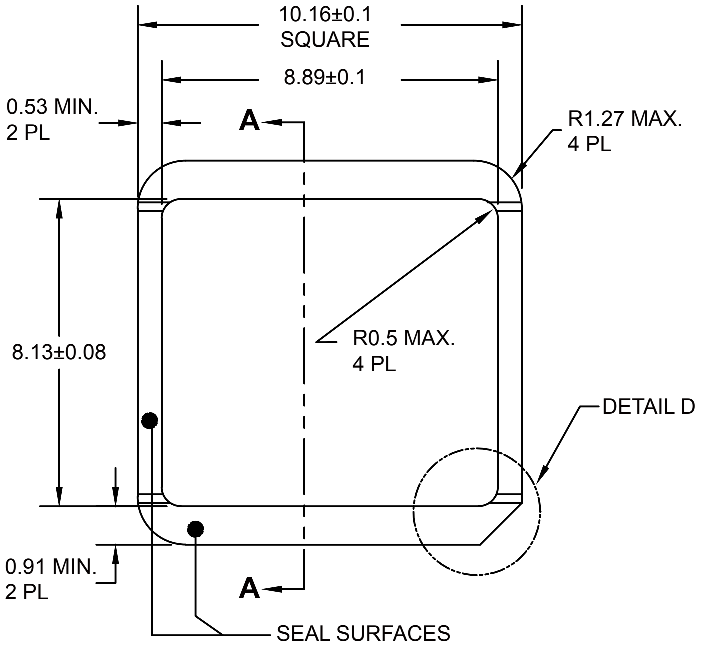


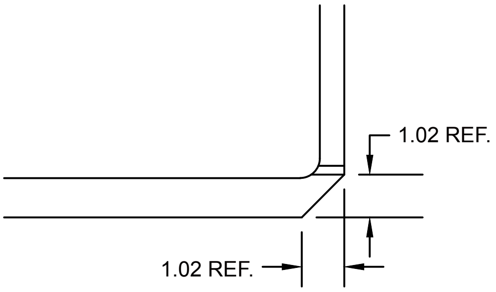
PLATING

- Ni-Co: 2.54μm Min (Co Weight Percent: 8~40%)
- Pd: 0.12~0.5μm
- Au: 0.2μm Min

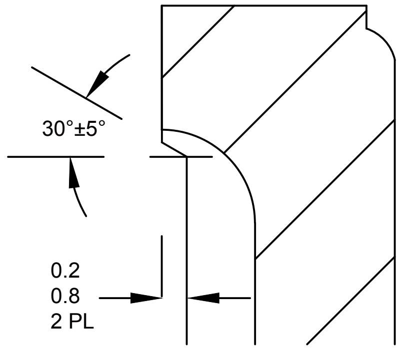
NO.	PART NAME	MATERIAL
4	KOVAR RING	Kovar 0.1T
3	LEAD FRAME	Alloy42
2	CERAMIC RING	Al_2O_3
1	FLANGE	S-CMC

Lid - SLID101101

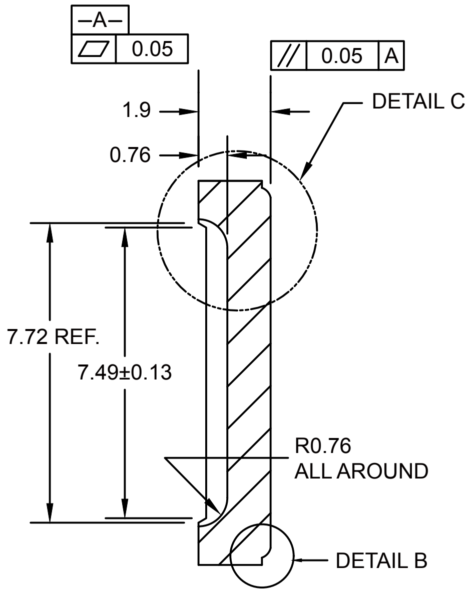




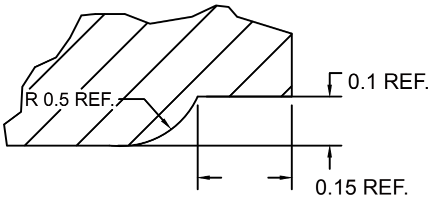
DETAIL D



DETAIL C



SECTION A-A

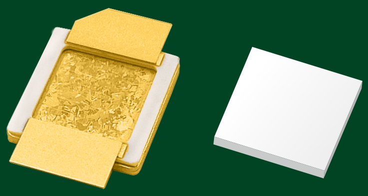


DETAIL B
ALL AROUND

NOTE
1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm
2. Epoxy applied 0.18 / 0.36 onto seal surfaces

KRFP099099-3

High Power,
Metal Ceramic RF Package



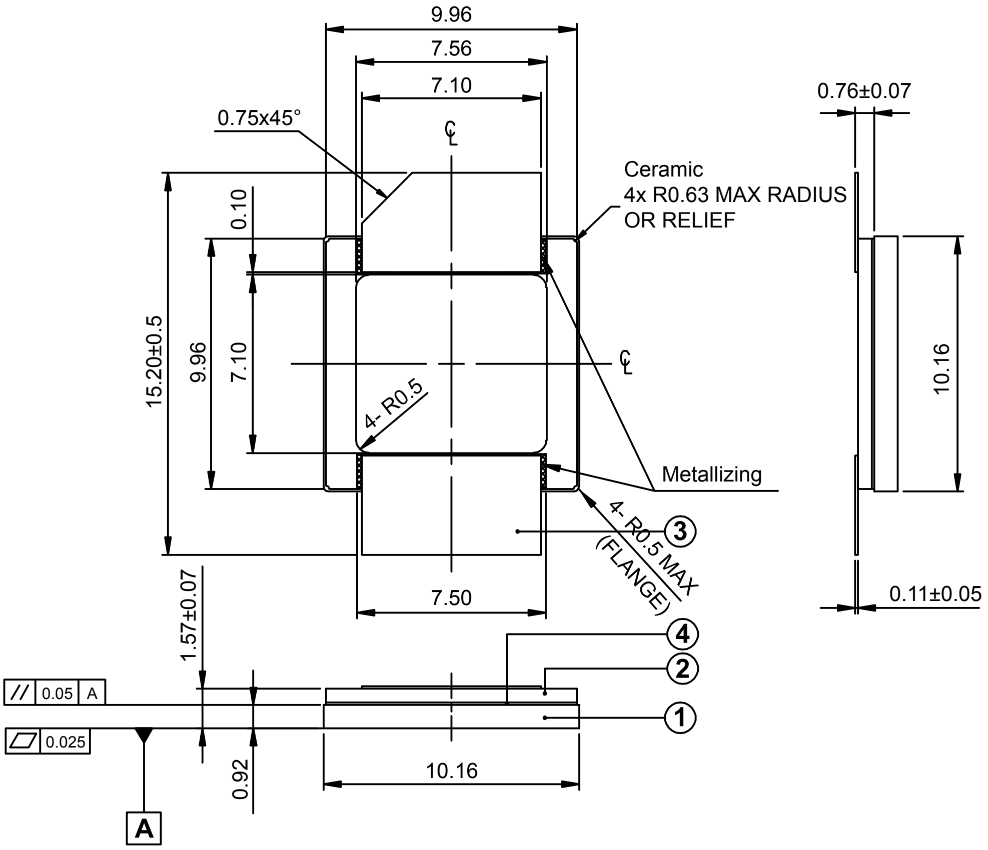
The KRFP099099-3 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

The KRFP099099-3 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	7.56*7.1 mm
Outer Dimension	9.96*9.96 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

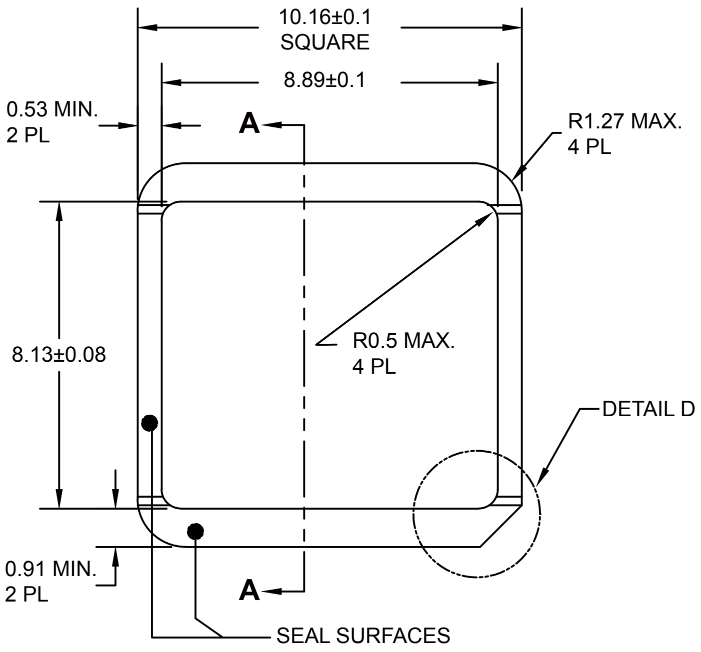
Base

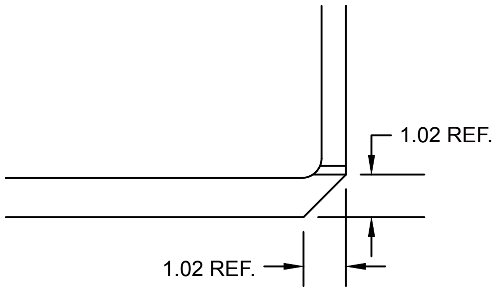


PLATING
- Ni-Co: 2.54μm Min (Co Weight Percent: 8~40%)
- Pd: 0.12~0.5μm
- Au: 0.2μm Min

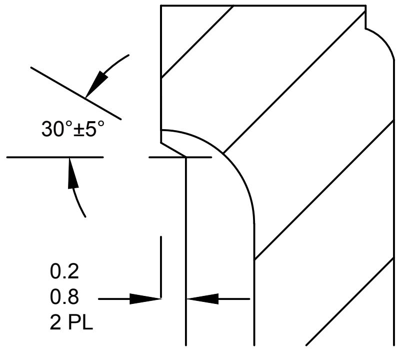
4	KOVAR RING	KOVAR 0.1T
3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	FLANGE	S-CMC
NO.	**PART NAME**	**MATERIAL**

Lid - SLID101101

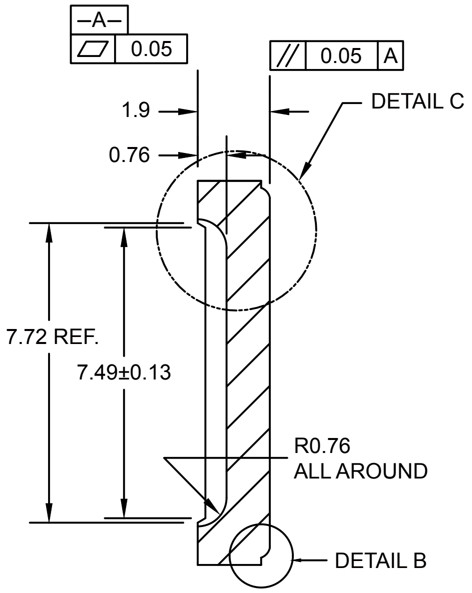




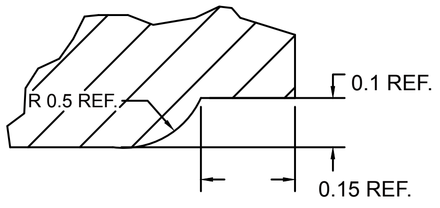
DETAIL D



DETAIL C



SECTION A-A



DETAIL B
ALL AROUND

NOTE
1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm
2. Epoxy applied 0.18 / 0.36 onto seal surfaces

KRFP140038

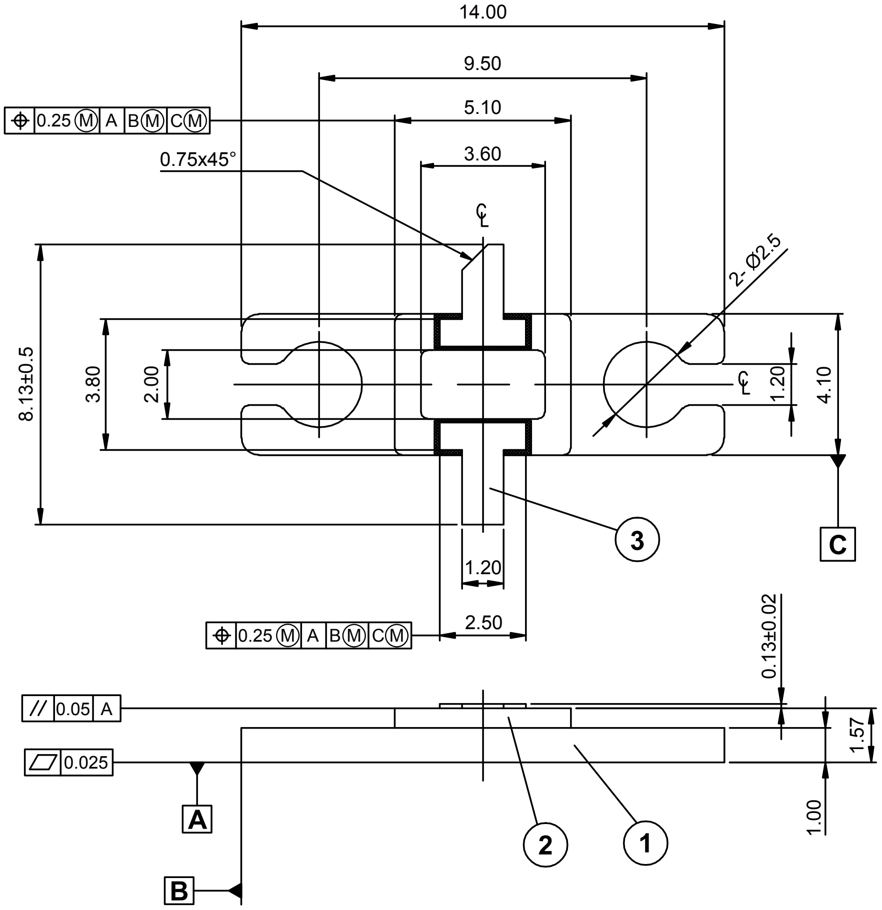
High Power,
Metal Ceramic RF Package

The KRFP140038 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.
The KRFP140038 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Feature	Description
Frequency Band	S, C, X
Inner Dimension	3.6*2mm
Outer Dimension	5.1*4*1mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base

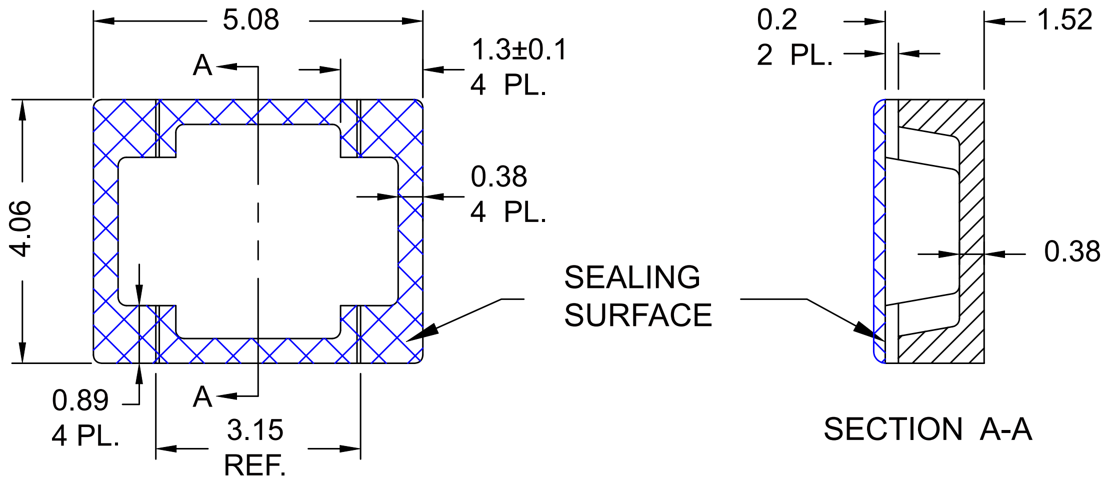


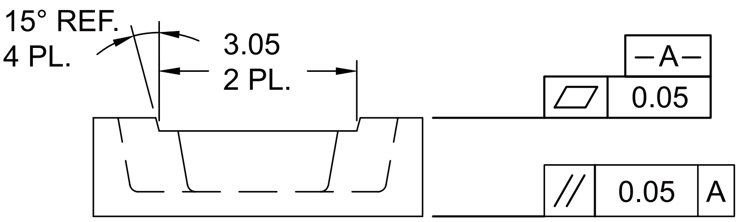
PLATING

NO.	Au	Nico (Co content:8~40%)
01	2.5μm MIN	2.5μm MIN
02	1.0μm MIN	2.5μm MIN

3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	FLANGE	CPC
NO.	**DESCRIPTION**	**MATERIAL**

Lid - SLID050040





NOTE

1. MATERIAL
   - 1-1 White Ceramic Al_2O_3 96%
   - 1-2 B-staged Epoxy 0.15~ 0.25 mm

KRFP140041

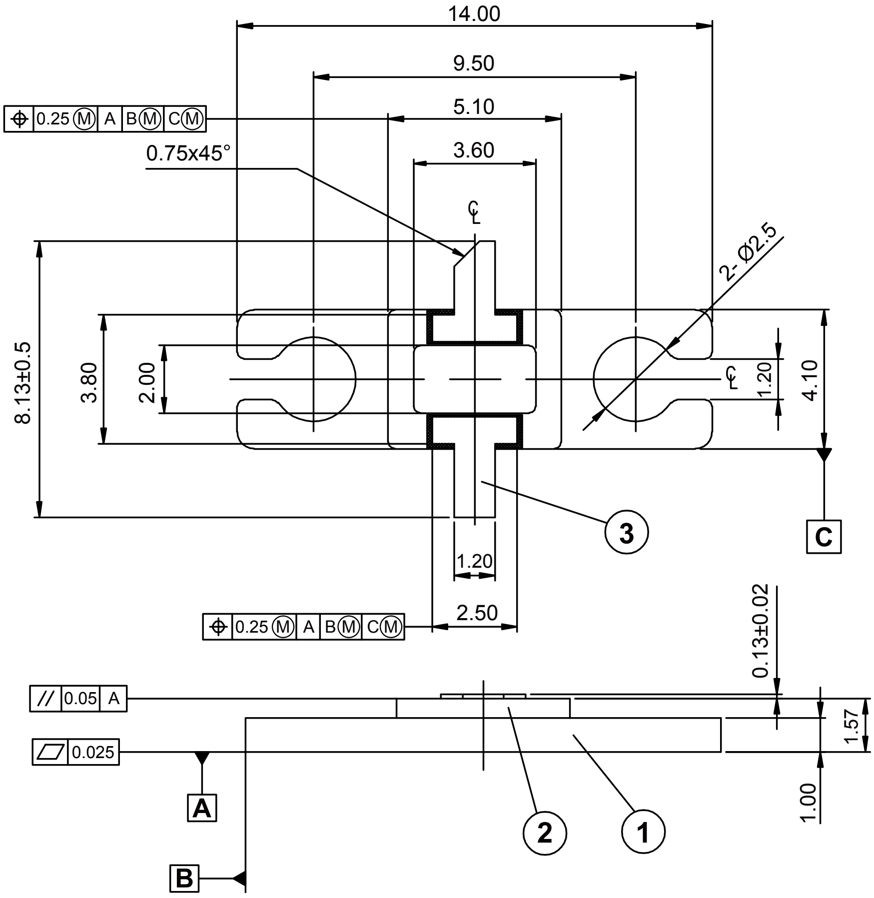
High Power,
Metal Ceramic RF Package

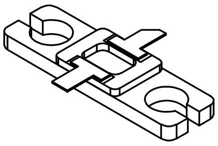
The KRFP140041 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.
The KRFP140041 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Feature	Description
Frequency Band	S, C, X
Inner Dimension	3.6*2mm
Outer Dimension	5.1*4.1mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base



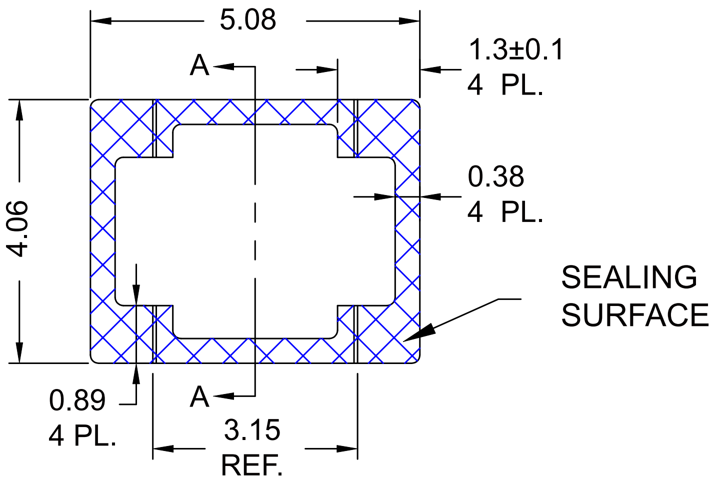


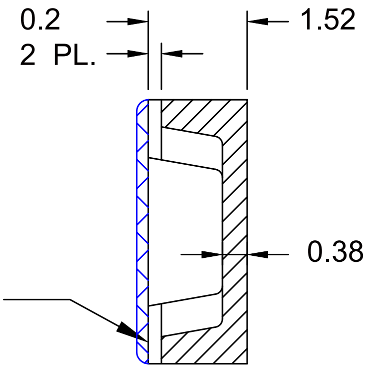
PLATING

- Ni-co: 2.54μm Min
(Co WEIGHT PERCENTt:8~40%)
- Pd: 0.12~0.5μm
- Au: 0.2μm Min

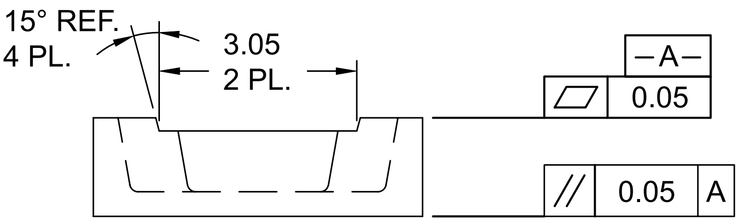
3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	FLANGE	S-CMC12.8%
NO.	**PART NAME**	**MATERIAL**

Lid - SLID050040





SECTION A-A



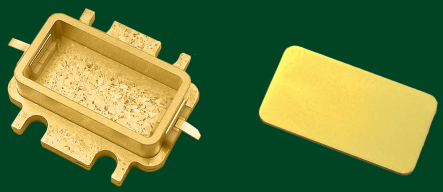
NOTE

1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm

Eltrix

KRFP166146

High Power,
Metal Ceramic RF Package

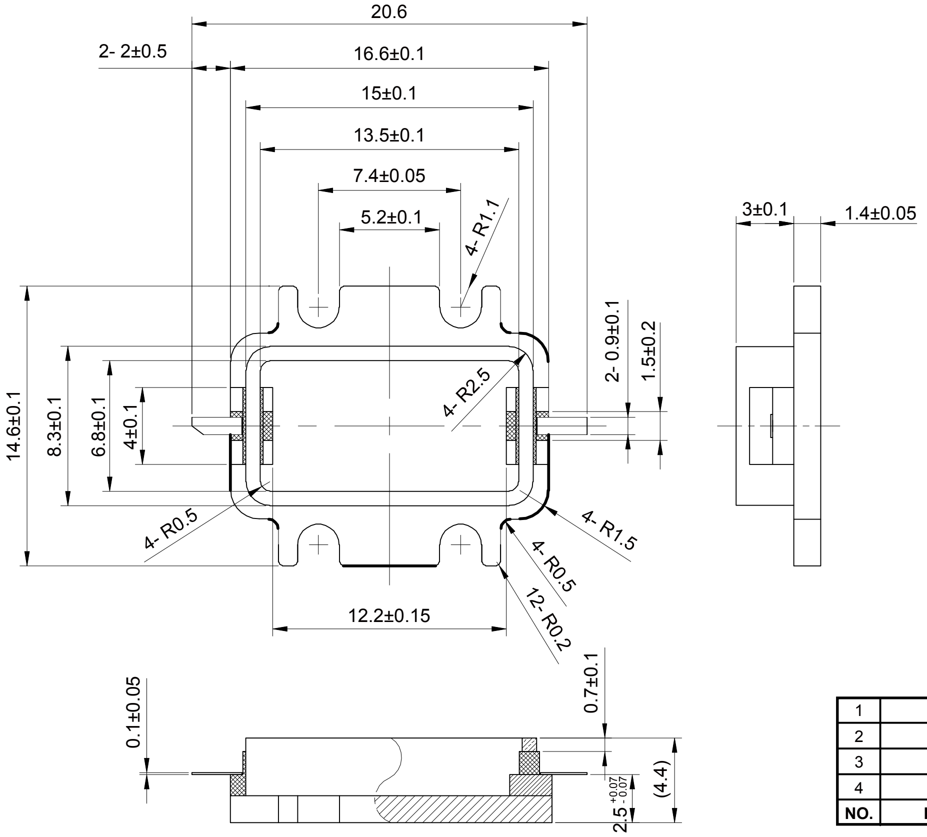


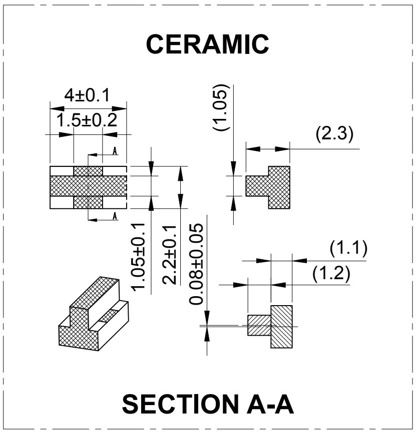
The KRFP166146 is hermetic package, which is suitable for Satellite, Radar Hermetically sealed feedthroughs. It offers great performance and reliability.
The KRFP166146 is a 2-leaded package. This package offers good heat conductivity and electromagnetic shielding. As well as low-loss transmission and high-speed data transmission.

Package	
Frequency Band	S,C,X
Inner Dimension	13.5*8.3 mm
Outer Dimension	16.6*14.6 mm
Seal Method	Eutectic
Number of Leads	2

Dimension (Unit: mm)

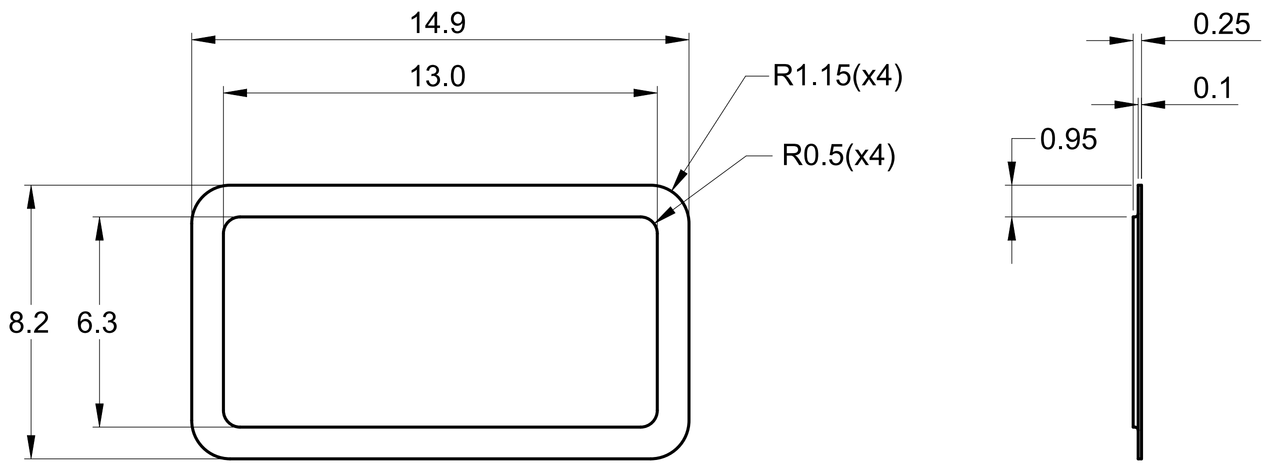
Base

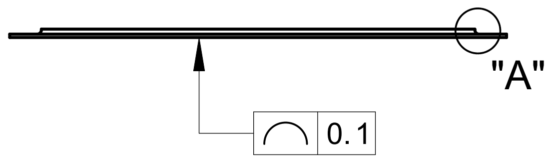


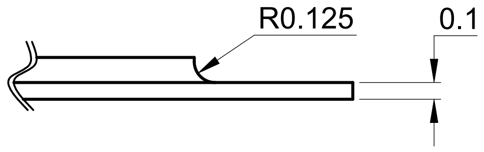


1	LEAD	2	Kovar
2	CERAMIC	2	Al_2O_3 92% MIN (White)
3	FLANGE	1	S-CMC(12.8%)
4	WALL	1	Kovar
NO.	**PART NAME**	**Q'TY**	**MATERIAL**

Lid - KLID149082







Detail "A", Non-Scale

NOTE

1. MATERIAL : KOVER
2. PLATING : Ni - 4.0um ~ 7.5um Min
   Au - 1.5um Min
3. FLATNESS : 0.02mm Max

Eltrix

KRFP203058

High Power,
Metal Ceramic RF Package

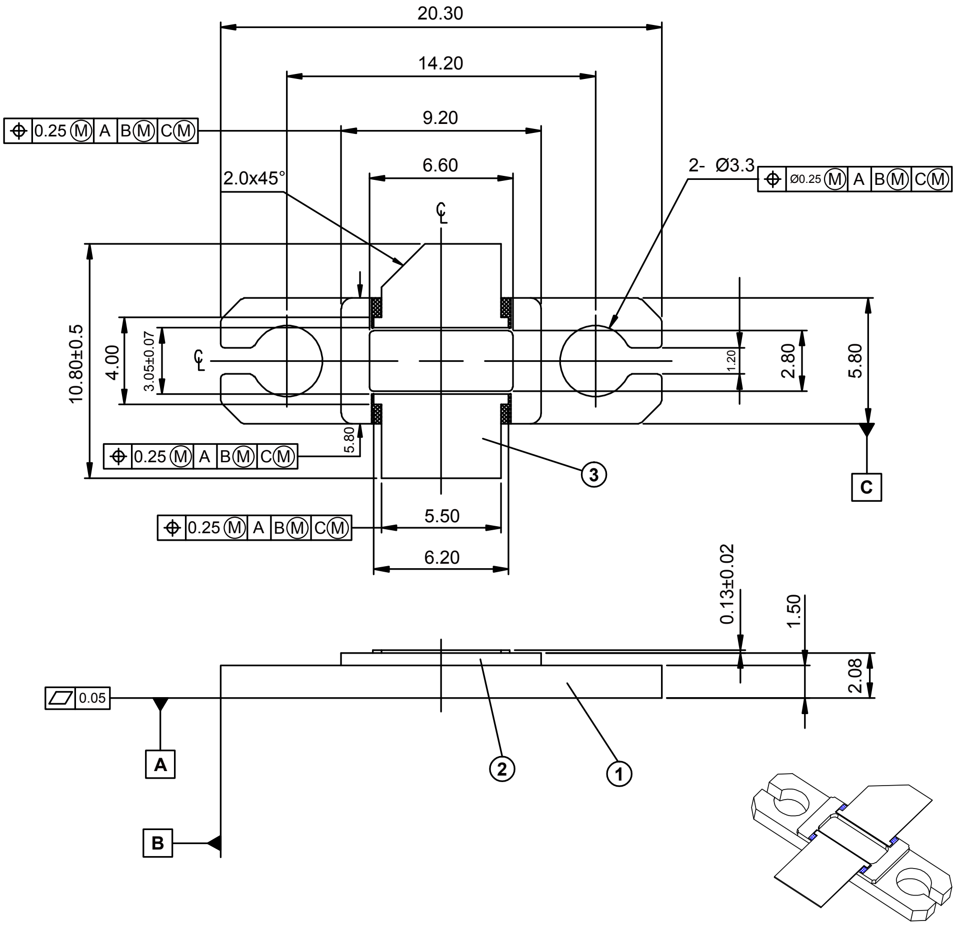
The KRFP203058 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

The KRFP203058 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	6.6*2.8 mm
Outer Dimension	9.2*5.8 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base

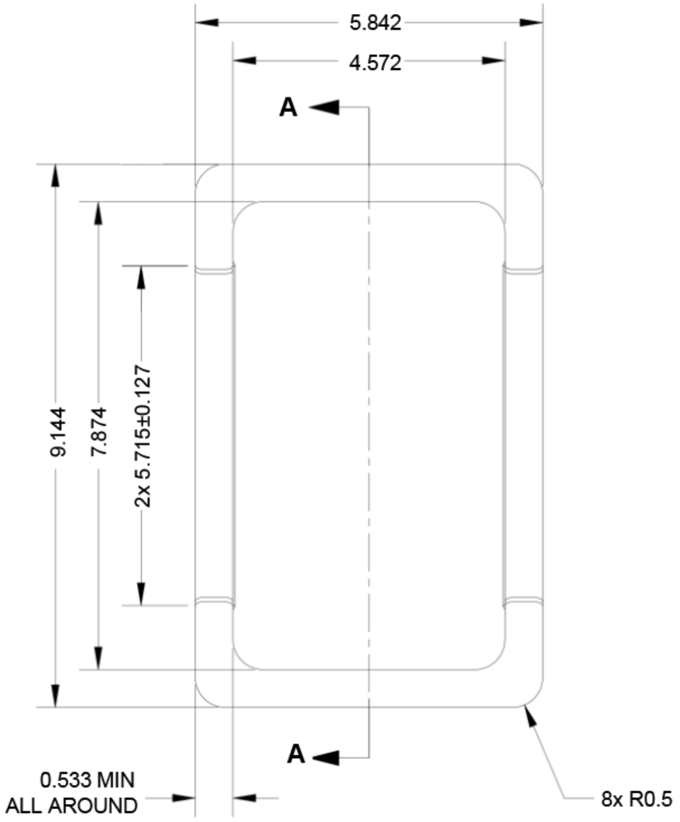


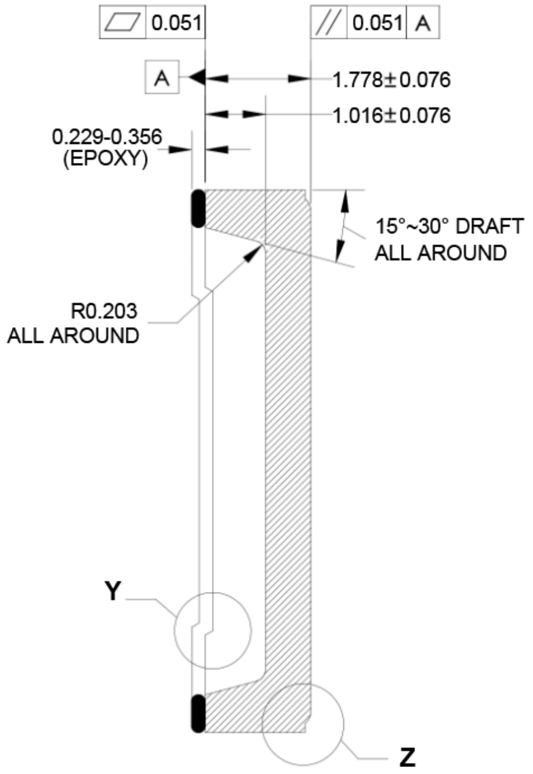
PLATING

NO.	Au	Nico (Co content:8~40%)
01	2.5μm MIN	2.5μm MIN
02	1.0μm MIN	2.5μm MIN

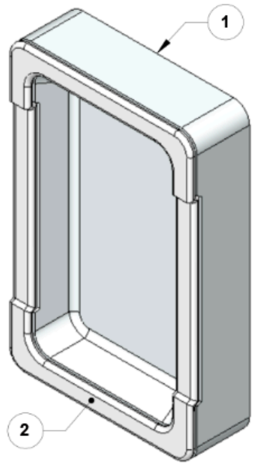
NO.	PART NAME	MATERIAL
3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	FLANGE	CPC

Lid - SLID091058

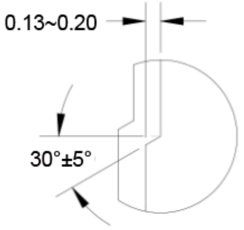




SECTION A-A

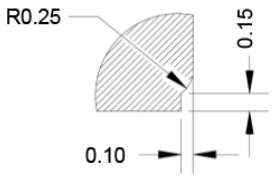


ISOMETRIC VIEW



DETAIL Y

NOTE
1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm



DETAIL Z
(OPTIONAL)

NO.	QTY	DESCRIPTION
1	1	White Ceramic Lid
2	A/R	B-stage Expoxy(RJ4B)

KRFP203058-2

High Power,
Metal Ceramic RF Package

2022 issue

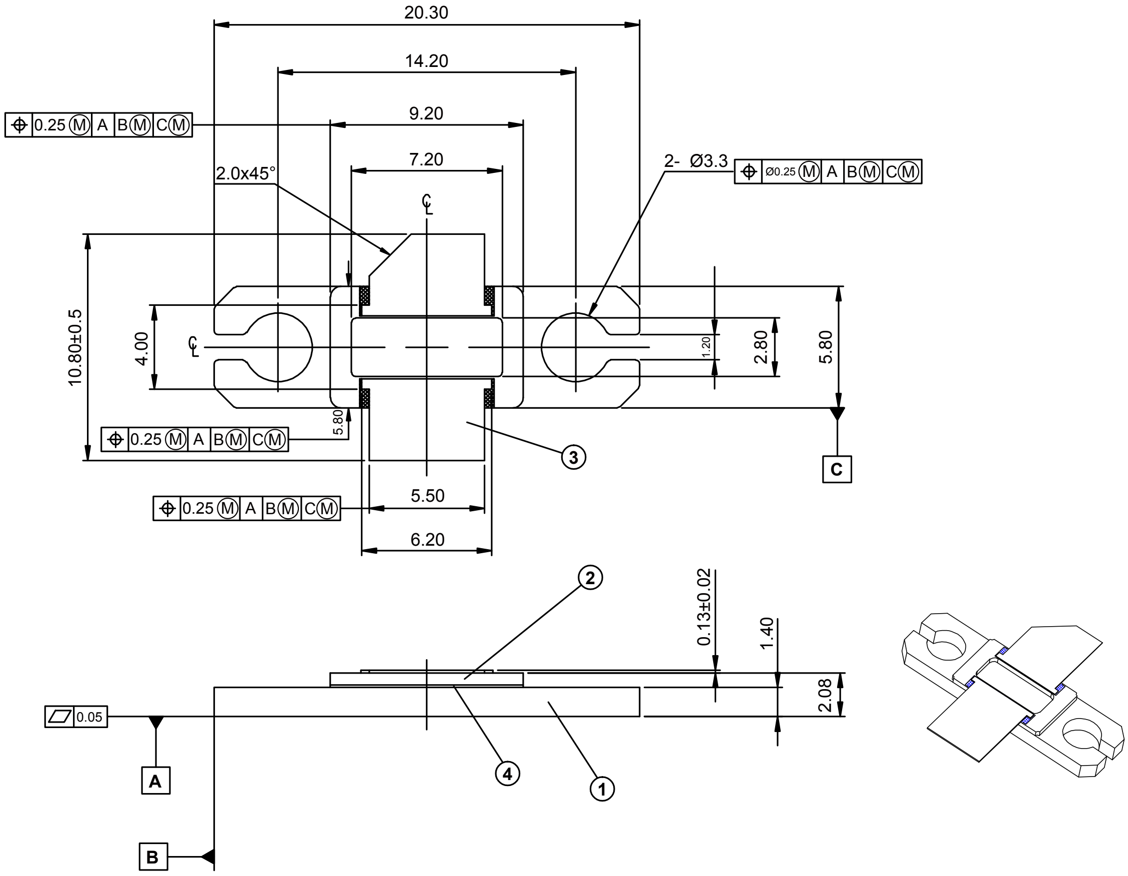
The KRFP203058-2 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

The KRFP203058-2 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	7.2*2.8 mm
Outer Dimension	9.2*5.8 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base

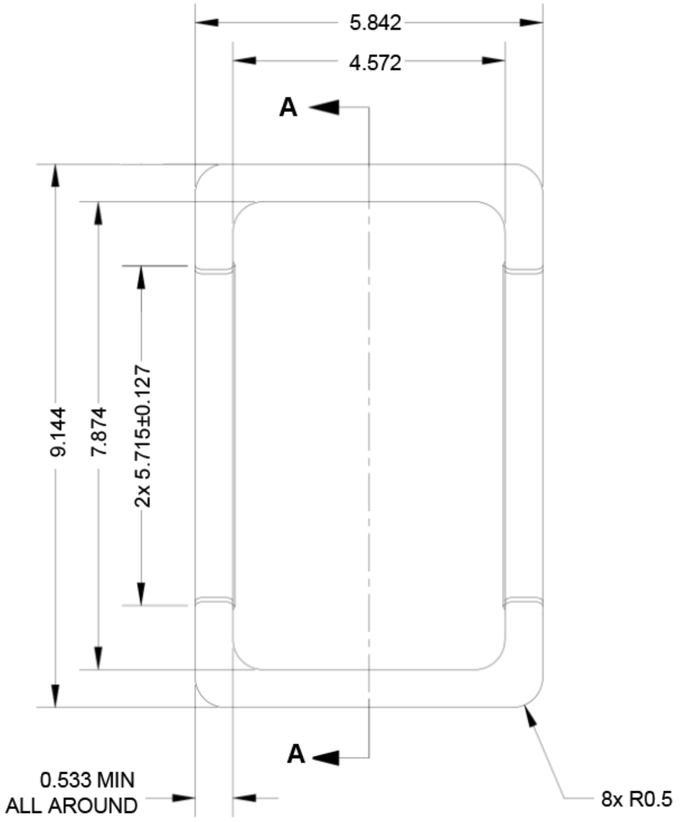


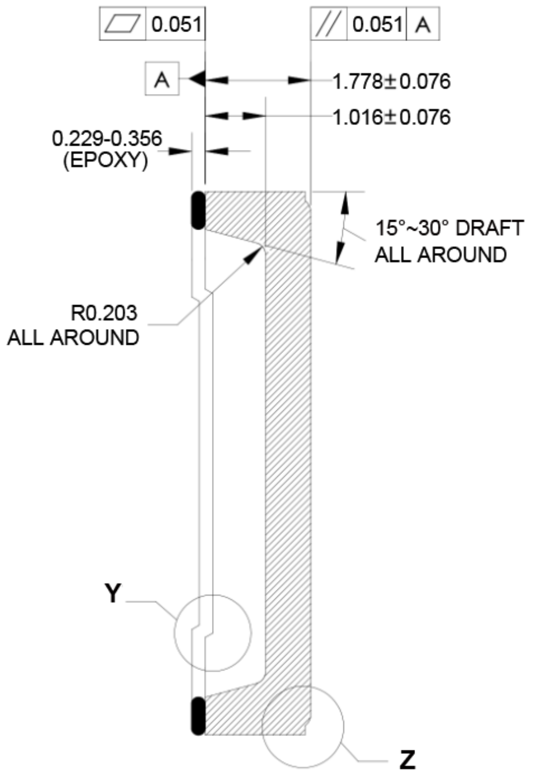
4	KOVAR RING	KOVAR
3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	FLANGE	S-CMC 12.8%
NO.	**PART NAME**	**MATERIAL**

PLATING

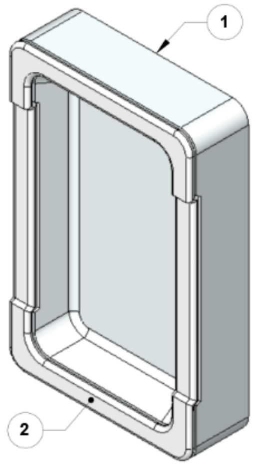
- Ni-Co: 2.54μm Min(Co Weight Percent: 8~40%)
- Pd: 0.12~0.5μm
- Au: 0.2μm Min

Lid - SLID091058

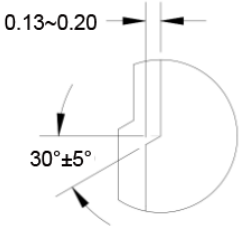




SECTION A-A

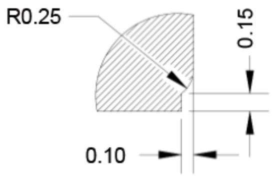


ISOMETRIC VIEW



DETAIL Y

NOTE
1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm



DETAIL Z
(OPTIONAL)

NO.	QTY	DESCRIPTION
1	1	White Ceramic Lid
2	A/R	B-stage Expoxy(RJ4B)

MRFP203058-62

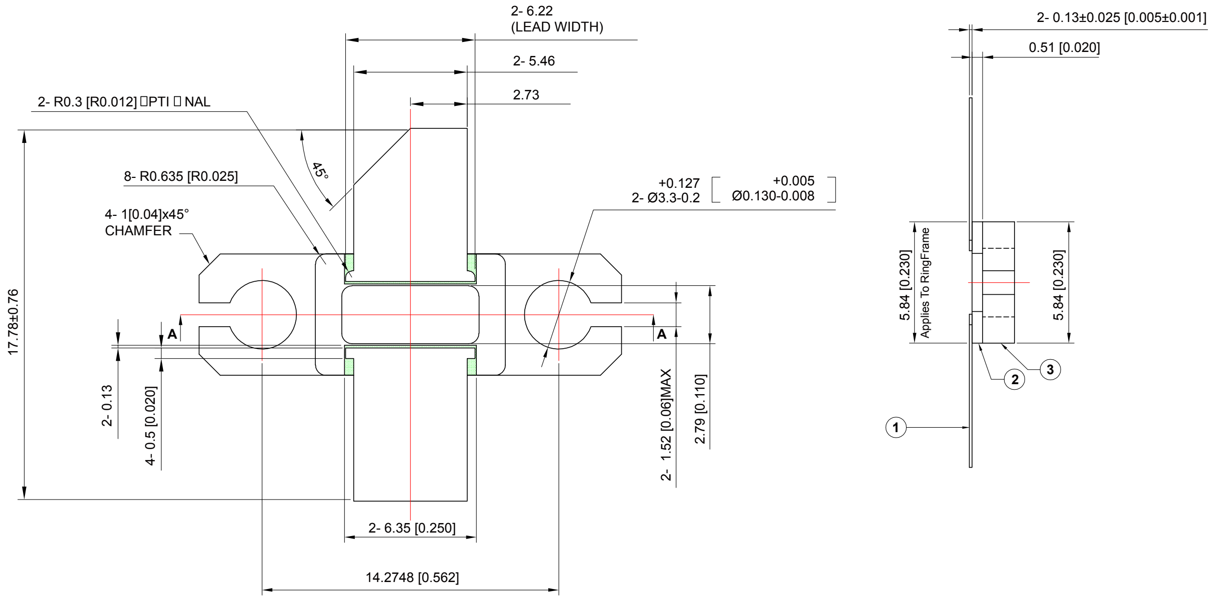
Ceramic
Air Cavity Package

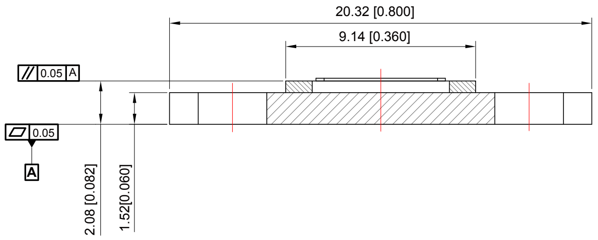
The MRFP203058-62 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability. The MRFP203058-62 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	6.22*1.52 mm
Outer Dimension	9.14*5.84mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base



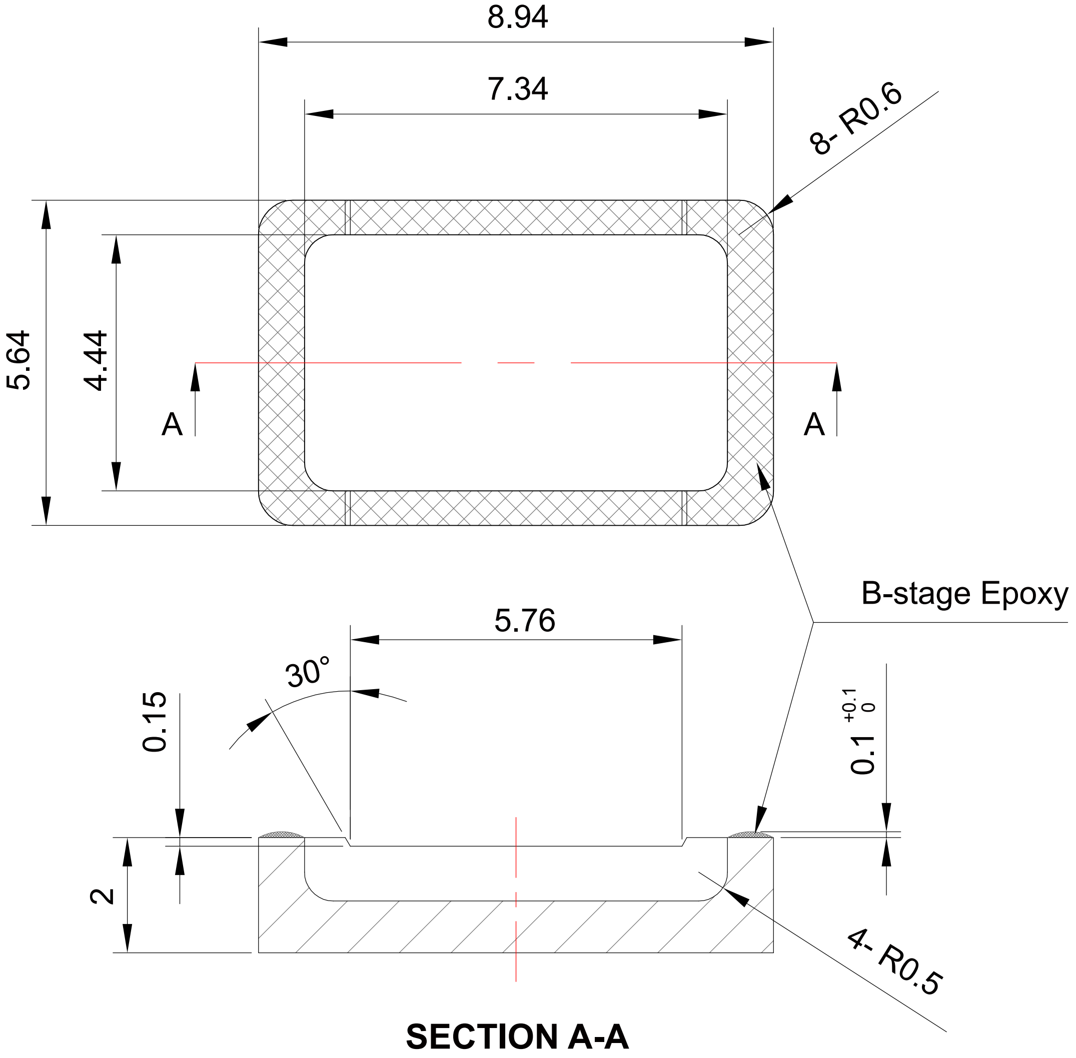


1	LEAD	Kovar	2
2	CERAMIC	Al_2O_3 92% MIN	1
3	FLANGE	CuMoCu(1:1:1)	1
NO.	**PART NAME**	**MATERIAL**	**QTY**

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. FINISH:
   - A. FLANGE, LEADS & METALLIZED PATTERNS : ELECTROLYTIC GOLD, 99.9% MIN PURITY, 90 KNOOP HARDNESS MAX, 1.5 MICROMETERS [60 MICROINCHES] MIN, THICK OVER NICKEL, 2.54 MICROMETERS [100 MICROINCHES] MIN. THICK
   - B. PLATING THICKNESS SHALL BE MEASURED AT APPROXIMATE LOCATION SHOWN ON INDICATED SURFACE
   - C. DOTTED AREAS DENOTE METALLIZED PATTERN
   - D. PLATING SHALL WITHSTAND 350±5°C IN REDUCING ATMOSPHERE FOR 5 MIN ±30 SEC WITHOUT BLISTERING, FLAKING OR DISCOLORATION

Lid - MLID089056



SECTION A-A

NOTE

1. MATERIAL
   - 1-1 White Ceramic Al2O3 96%
   - 1-2 B-staged Epoxy 0.15~ 0.25 mm

KRFP203099

High Power,
Metal Ceramic RF Package

2022 issue

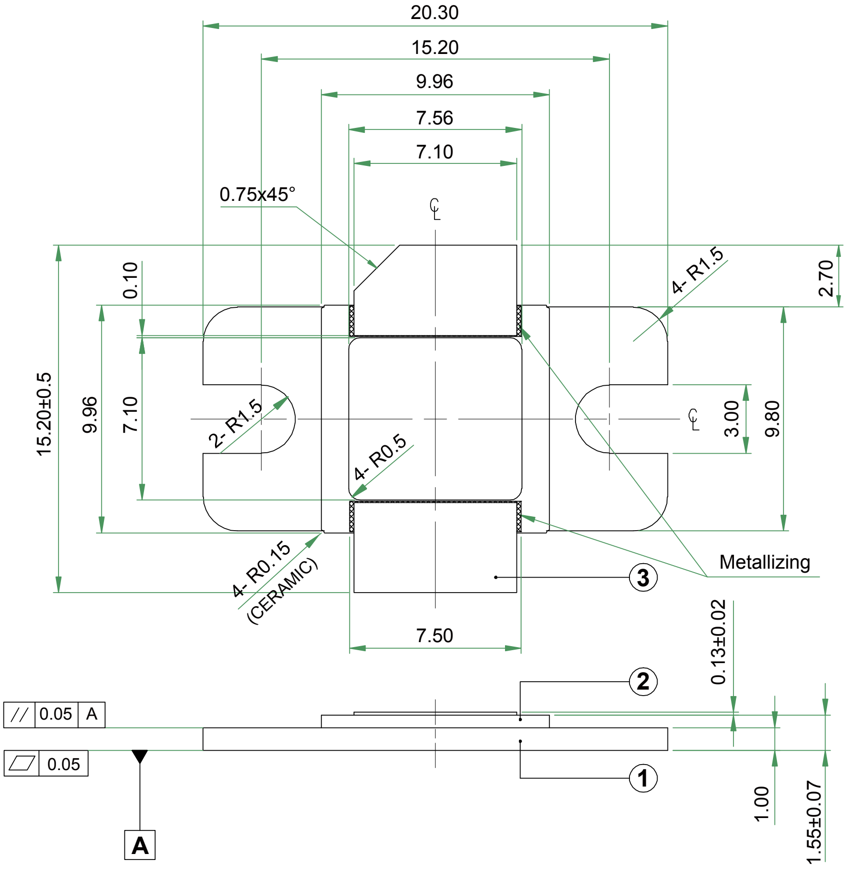
The KRFP203099 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

The KRFP203099 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	7.56*7.1 mm
Outer Dimension	9.96*9.96 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base

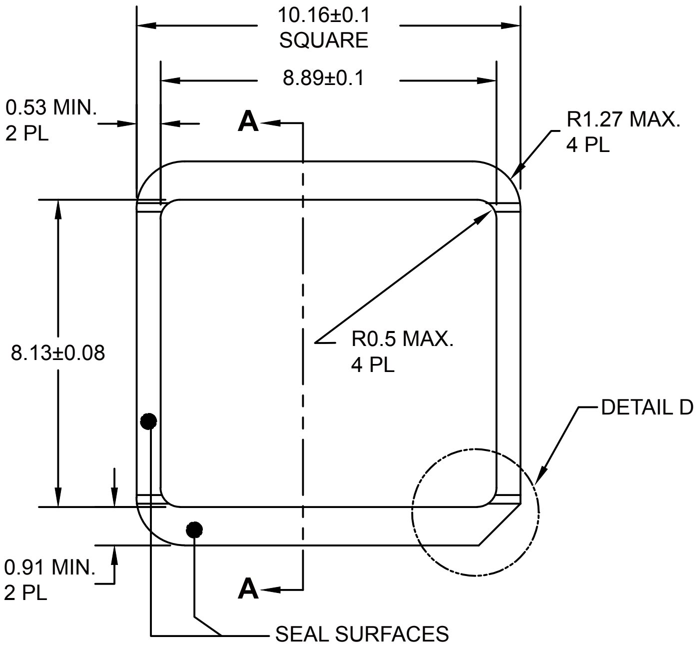


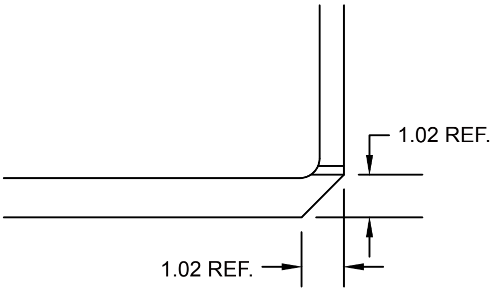
PLATING

NO.	Au	Nico (Co content:8~40%)
01	2.5μm MIN	2.5μm MIN
02	1.0μm MIN	2.5μm MIN

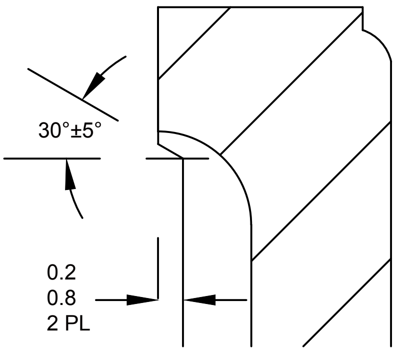
3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	FLANGE	CPC
NO.	**PART NAME**	**MATERIAL**

Lid - SLID101101

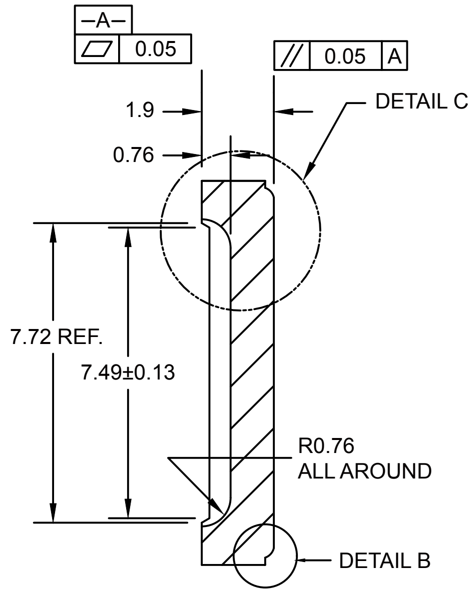




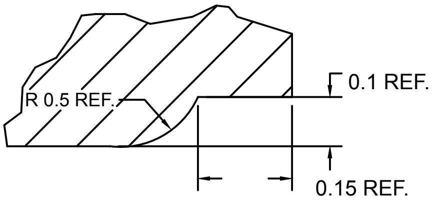
DETAIL D



DETAIL C



SECTION A-A



DETAIL B
ALL AROUND

NOTE
1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm
2. Epoxy applied 0.18 / 0.36 onto seal surfaces

KRFP203099-2

High Power,
Metal Ceramic RF Package

2022 issue

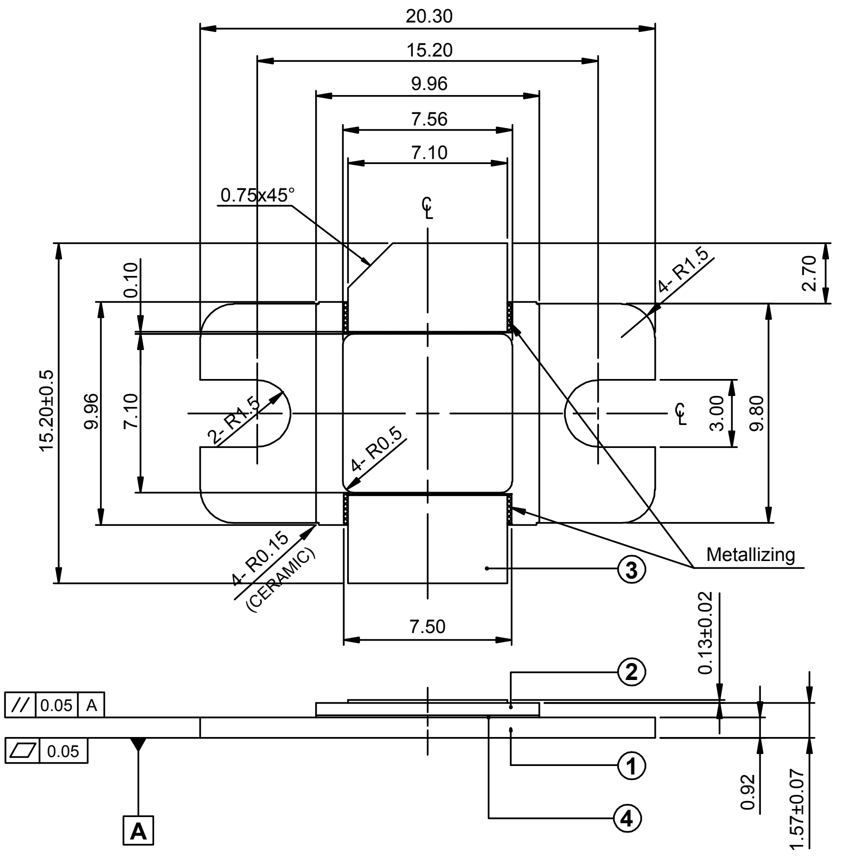
The KRFP203099-2 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

The KRFP203099-2 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	7.56*7.1 mm
Outer Dimension	9.96*9.96 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base

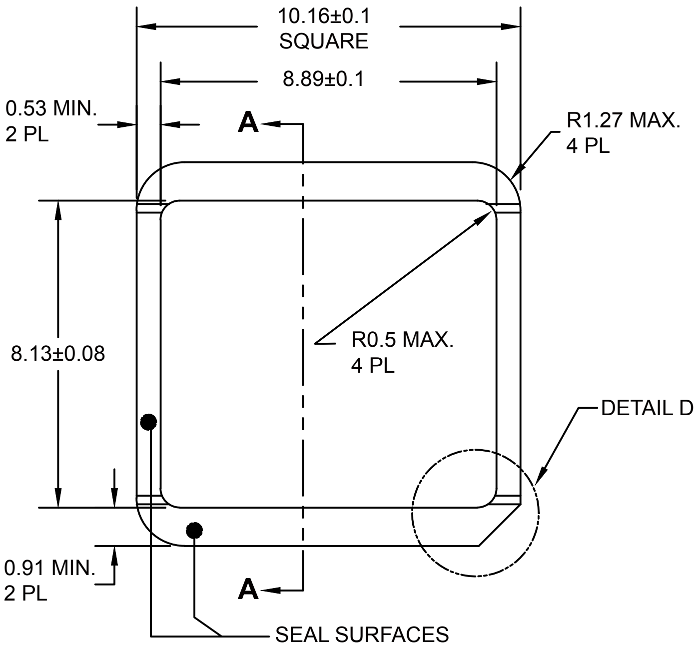


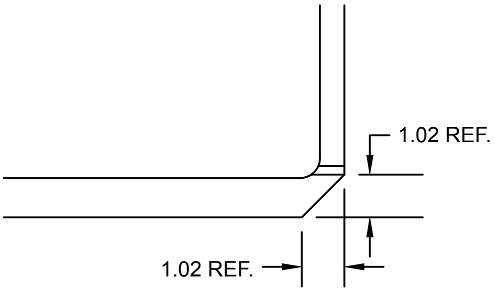
PLATING

NO.	Au	Nico (Co content:8~40%)
01	2.5μm MIN	2.5μm MIN
02	1.0μm MIN	2.5μm MIN

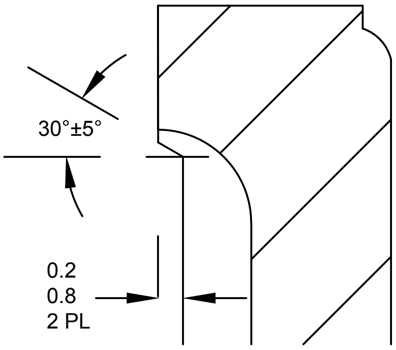
4	KOVAR RING	KOVAR 0.1T
3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	FLANGE	S-CMC
NO.	**PART NAME**	**MATERIAL**

Lid - SLID101101

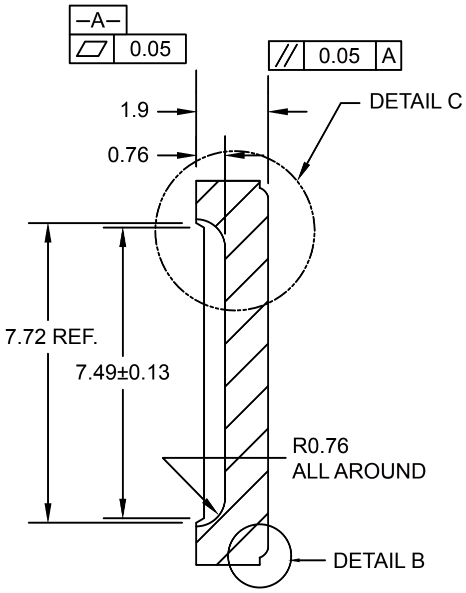




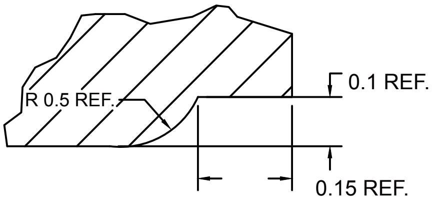
DETAIL D



DETAIL C



SECTION A-A

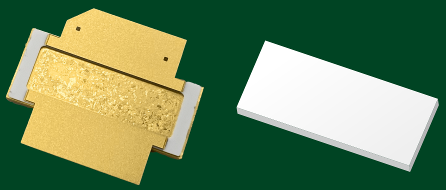


DETAIL B
ALL AROUND

NOTE
1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm
2. Epoxy applied 0.18 / 0.36 onto seal surfaces

KRFP205097

High Power,
Metal Ceramic RF Package



2022 issue

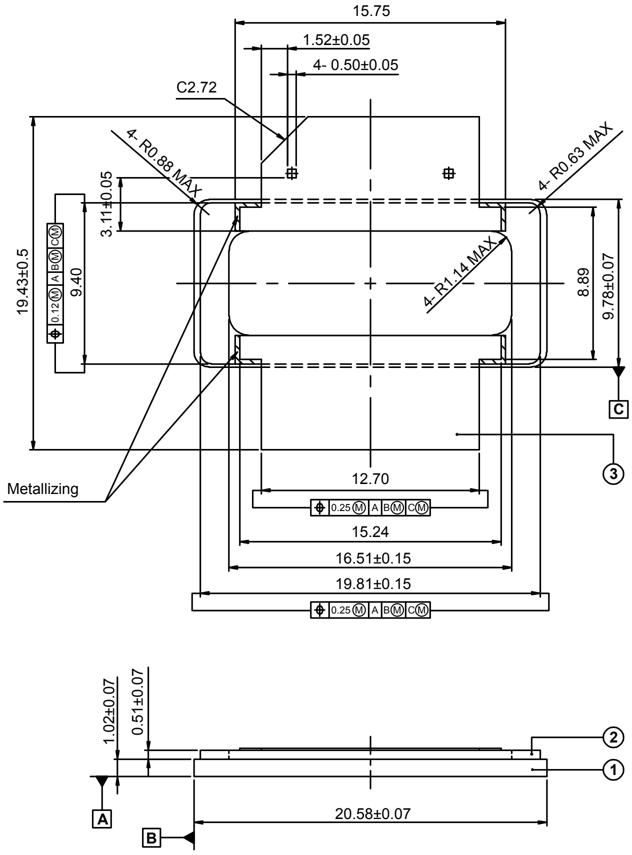
The KRFP205097 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

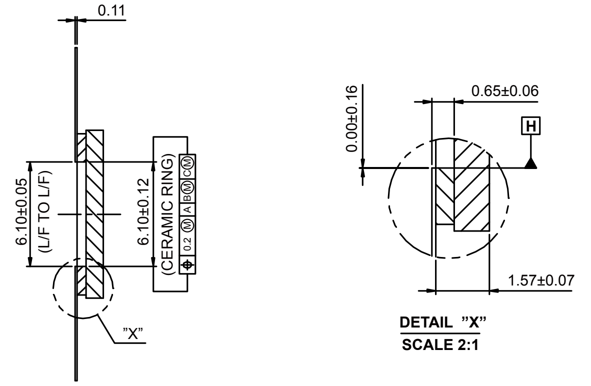
The KRFP205097 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	16.51*6.1 mm
Outer Dimension	19.81*9.78 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base

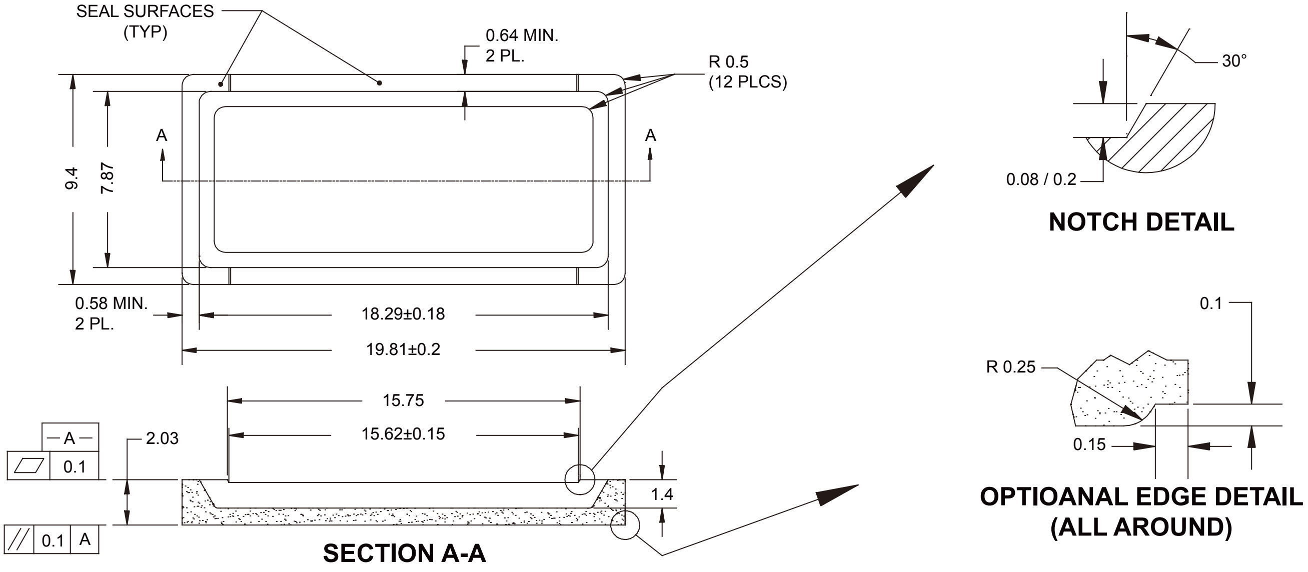




NOTE.
1. PLATING THICKNESS MEASUREMENT SITES.
   Ni : 2.54um MIN.
   Co CONTENT Ni PLATING SHELL BE 20~40% PER SMI-ED STD.
   Au : D/A AREA 2.54um MIN
   LEADFRAME 1.143±0.254um
2. AREAS DENOTE METALLIZATION.
3. FLANGE
   1)METERIAL : CPC141 Cu/PCM/Cu (PCM : Cu30%, Mo70%)
   2)CROSS F ROLLING
   3)THERMAL CONDUCTIVITY : 210 W/mk MIN.
4. DIE ATTACH AREA TO BE FLAT WITHIN 0.025mm MAX.
5. CLIPPING AREA : ANY NON-CRITICAL AREAS OUTSIDE THE PACKAGE CAVITY.
6. LAMINATED W/F.

NO.	PART NAME	MATERIAL
3	LEAD FRAME	Alloy42
2	CERAMIC RING	Al_2O_3 96
1	FLANGE	CPC(1:4:1)

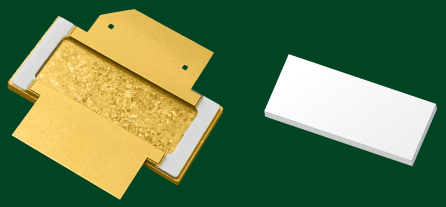
LID – SLID198094



NOTE
1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm
2. Epoxy applied 0.18 / 0.36 onto seal surfaces

KRFP231097

High Power,
Metal Ceramic RF Package



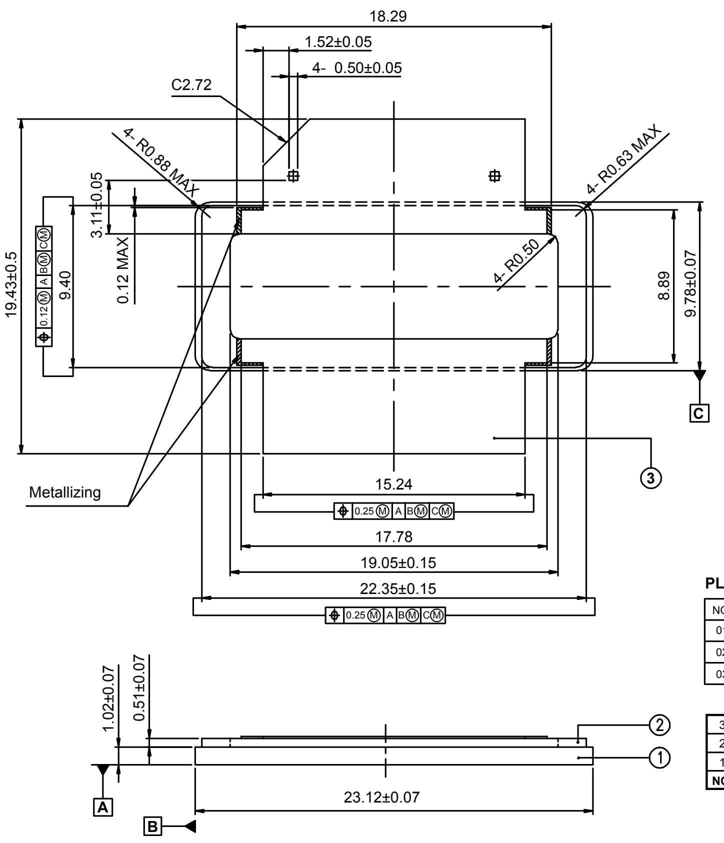
The KRFP231097 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

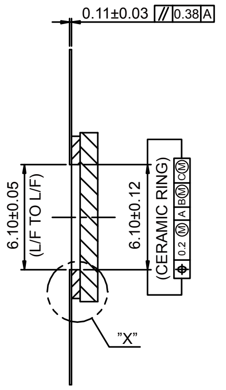
The KRFP231097 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

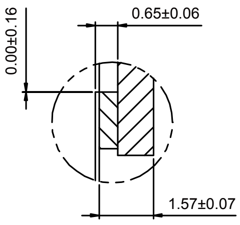
Package	
Frequency Band	S,C,X
Inner Dimension	18.29*6.1 mm
Outer Dimension	23.12*9.78 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base







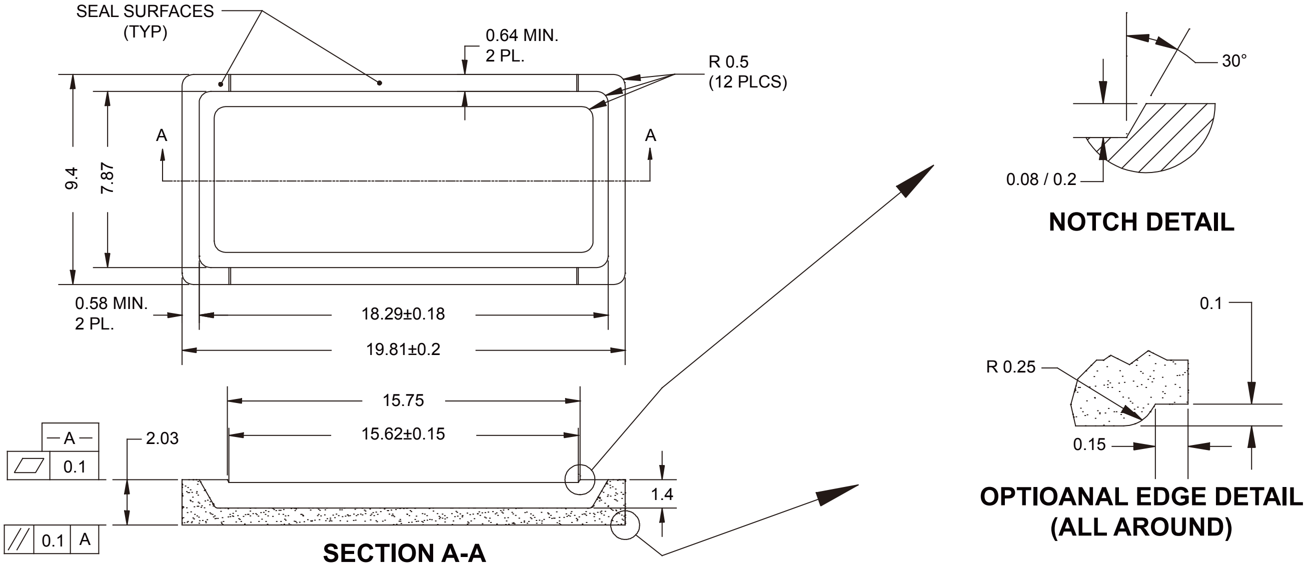
DETAIL "X"
SCALE 2:1

PLATING

NO.	Au	Nico (Co content:8~40%)
01	2.5μm MIN	2.5μm MIN
02	1.5μm MIN	2.5μm MIN
03	1.0μm MIN	2.5μm MIN

3	LEAD FRAME	Alloy42
2	CERAMIC RING	Al_2O_3 96
1	FLANGE	CPC(1:4:1)
NO.	**PART NAME**	**MATERIAL**

LID – SLID198094

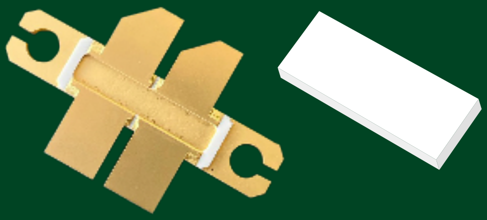


NOTE
1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm
2. Epoxy applied 0.18 / 0.36 onto seal surfaces

Eltrix

MRFP289058

High Power,
Metal Ceramic RF Package



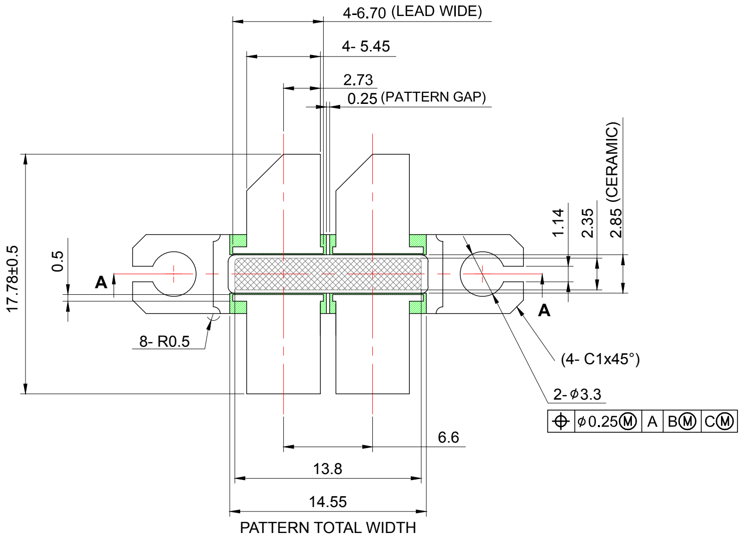
2022 issue

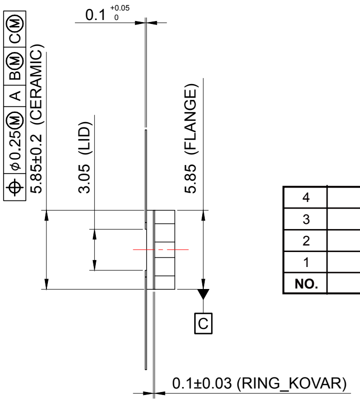
The MRFP289058 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability. The MRFP289058 is a 4-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	14.8*2.85 mm
Outer Dimension	17*5.85 mm
Seal Method	B-stage Epoxy
Number of Leads	4

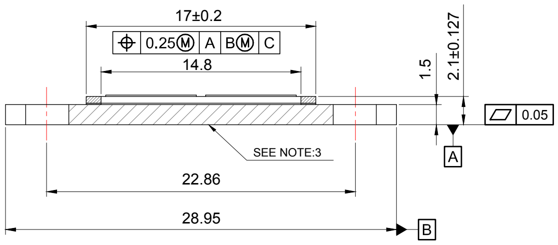
Dimension (Unit: mm)

Base





4	RING	KOVAR
3	CERAMIC	Alumina 96% (White)
2	FLANGE	CPC(1:1:1)
1	LEAD	KOVAR or ALLOY2
NO.	**PART NAME**	**MATERIAL**

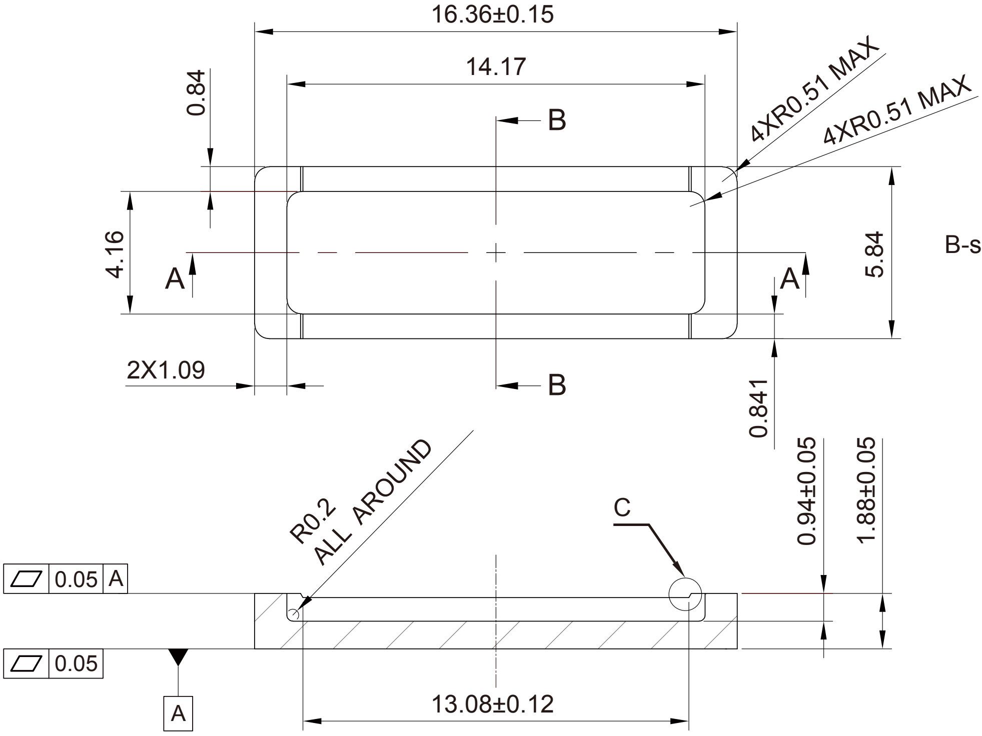


SECTION A-A

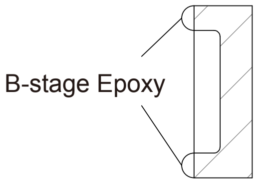
NOTES:

1. PLATING
   Ni THICKNESS : 2.540um [100 MICRO INCHES] MIN.
   Co CONTENT IN Ni PLATING SHALL BE 10-20% PER SMI-ED STD.
   Au THICKNESS
   D/A AREA : 2.540um [100 MICRO INCHES] MIN.
   LEAD FRAME : 1.143um [40 MICRO INCHES] MIN.
2. 🟩 AREAS DENOTE METALLIZATION.
3. FLANGE
   1) MATERIAL : CPC111 Cu/PCM/Cu (PCM : Cu30%, Mo70%)
4. DIE ATTACH AREA TO BE FLAT WITHIN .001(0.05) IN 2 CROSS-HATCHED ZONES.
5. CLIPPING AREA : ANY NON-CRITICAL AREAS OUTSIDE THE PACKAGE CAVITY.
6. LAMINATED W/F.
7. Plated die mount Scratch or collision damages on the surface are not allowed.
8. Remove all burrs and sharp edges, clean the oil pollution.
9. After 5 minutes at 420°C, no blister, lifting, peeing or discoloration of plating is allowed as seen under 10x magnification.
10. Plated die mount surface to be flat within 0.05 MAX.
11. The backside of the flange to be flat within 0.05 MAX.
12. No stains are acceptable.
13. No void is allowed at the materials interface.

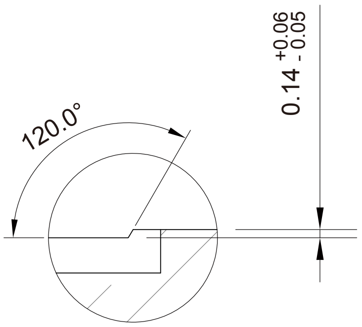
Lid - MLID163058



SECTION “A-A”



SECTION “B-B”



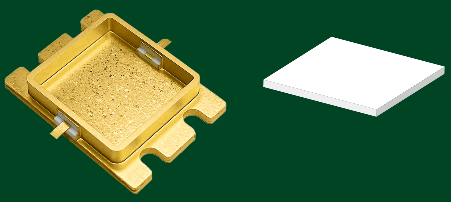
SECTION “C” (2:1)

Eltrix is pursuing to be one of world's reliable provider of MMIC and RF products.Using our portfolio of products and services to meet our customer's satisfaction, we seek to develop the most reliable, innovative and practical MMIC solution to you.

Eltrix

KRFP240174

High Power,
Metal Ceramic RF Package



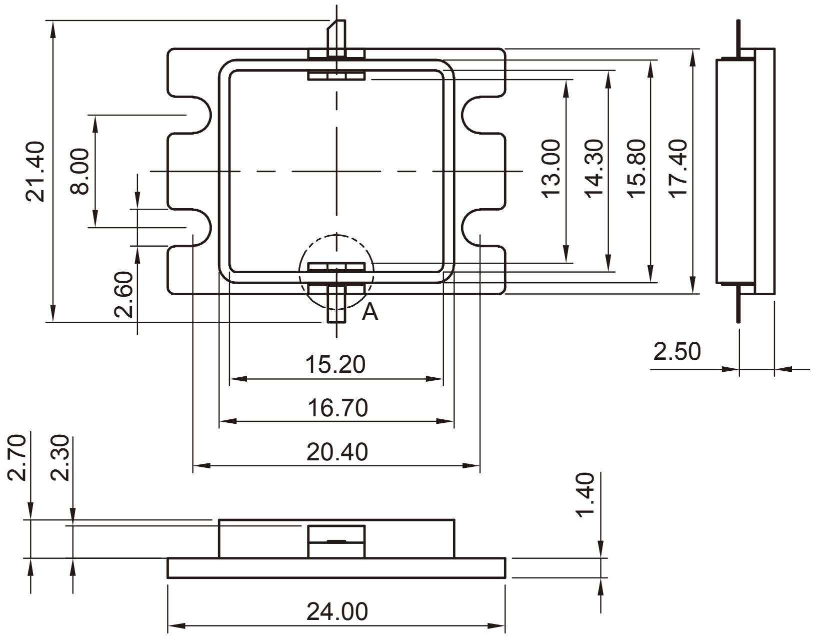
2022 issue

The KRFP240174 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability. The KRFP240174 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

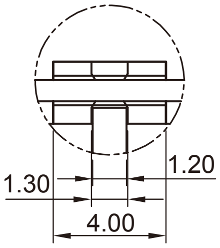
Package	
Frequency Band	S,C,X
Inner Dimension	16.7*15.8 mm
Outer Dimension	24*17.4 mm
Seal Method	Eutectic
Number of Leads	2

Dimension (Unit: mm)

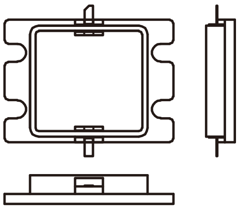
Base



4	LEAD FRAME	Kovar or Alloy42
3	WALL	KOVAR
2	CERAMIC	Al_2O_3 96%
1	FLANGE	CPC141
NO.	**PART NAME**	**MATERIAL**



DETAIL A
SCALE 4:1

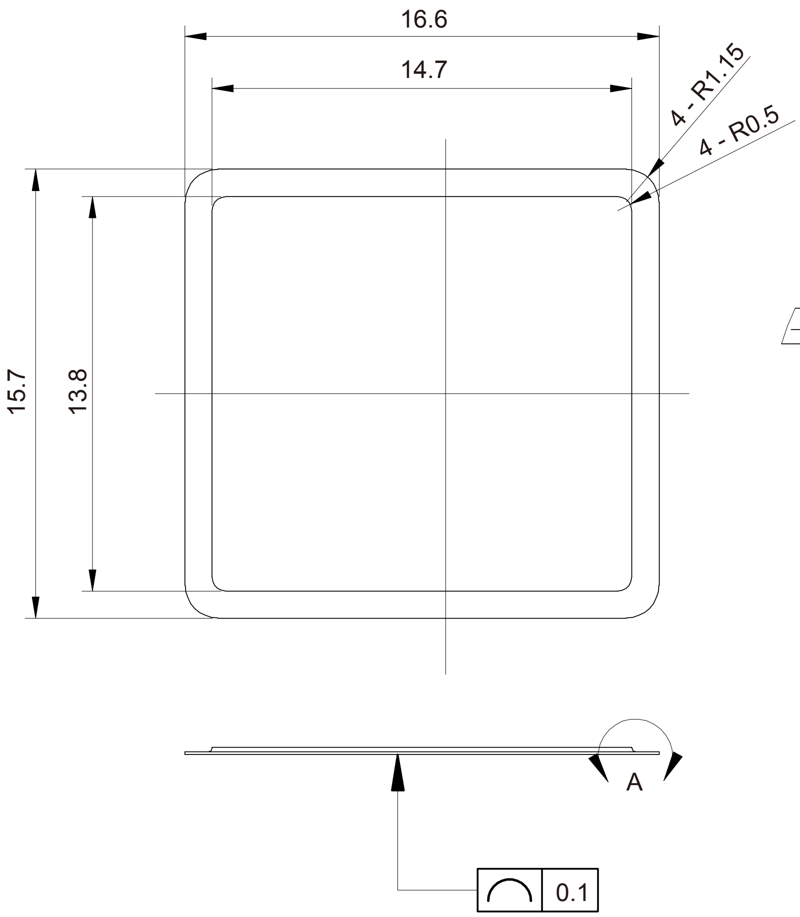


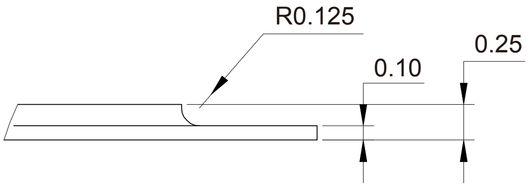
SCALE 1:1

NOTE

1. PLATING : 1.5um Au MIN OVER 4um Ni MIN ON METAL AND METALLIZATION.
2. PLATING MUST WITHSTAND 400±5°C FOR 3MINUTE IN NITROGEN ATMOSPHERE - WITHOUT BLISTERING, PEELING OR DISCOLORATION.
3. VOID OR DISCONTINUITIES IN THE CERAMIC TO FLANGE BRAZE JOINT AREA ARE ACCEPTABLE.
- LEAK RATE LESS THAN 1 X 10E-8 ATM CC/SEC AS MEASSURED BY He LEAK DETECTOR.
4. OVERFLOWED BRAZING MATERIAL FROM CERAMIC TO DIE BONDING AREA ALLOWED 0.25 MAX.
5. TO APPLIED TO CERAMIC THICKNESS PRIOR TO METALLIZATION
6. PLATED DIE MOUNT SURFACE TO BE FLAT WITHIN 0.025 MAX.
7. LEAD PULL STRENGTH MUST BE MORE THAN 0.5kgf AT AN ANGLE OF 90°
8.SURFACE ROUGHNESS : Ra < 0.6um

Metal Lid - KLID166157



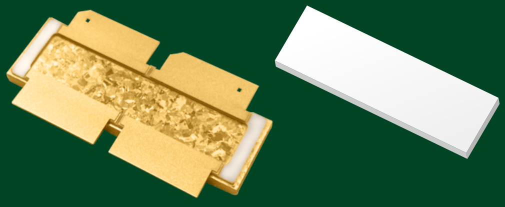


DETAIL “A” (X5)

PLATING:
- Ni: 2.5um Min
- Au: 1.5um Min

KRFP322101-2

High Power,
Metal Ceramic RF Package



2022 issue

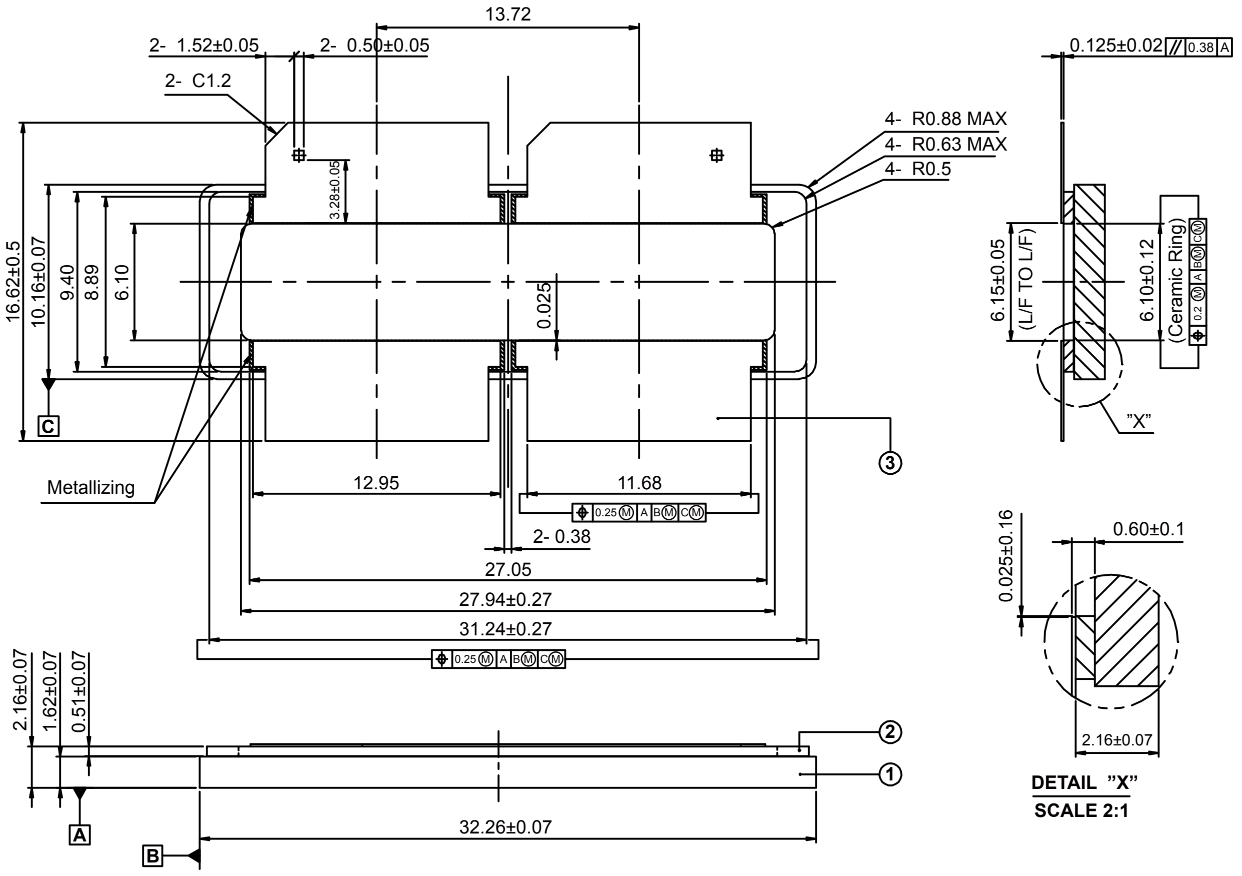
The KRFP322101 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

The KRFP322101 is a 4-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	27.94*6.1 mm
Outer Dimension	32.26*10.16 mm
Seal Method	B-stage Epoxy
Number of Leads	4

Dimension (Unit: mm)

Base

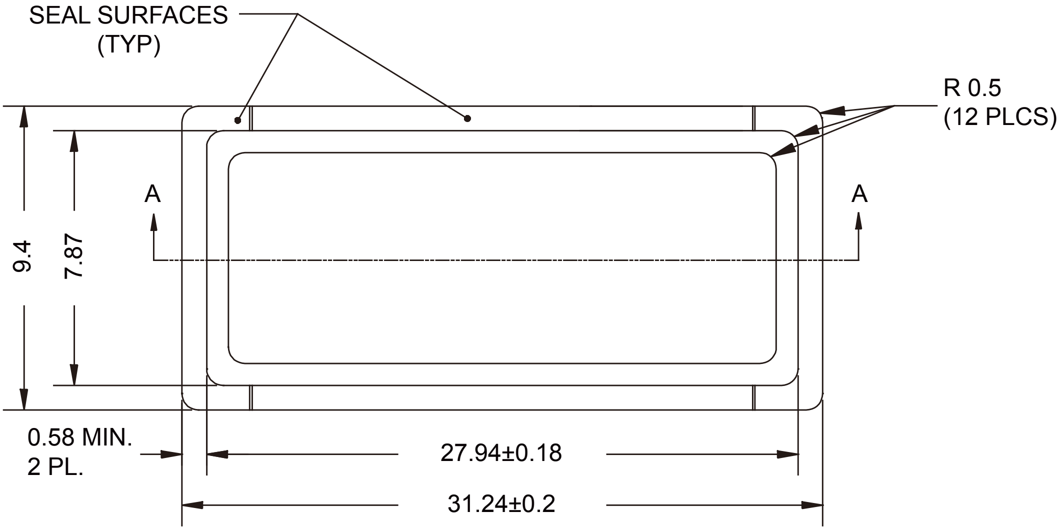


PLATING

NO.	Au	Nico (Co content:8~40%)
01	2.5μm MIN	2.5μm MIN
02	1.0μm MIN	2.5μm MIN

3	LEAD FRAME	Alloy42
2	CERAMIC RING	Al_2O_3 96%
1	FLANGE	CPC(1:4:1)
NO.	**PART NAME**	**MATERIAL**

Lid – SLID312094



KRFP340097

High Power,
Metal Ceramic RF Package

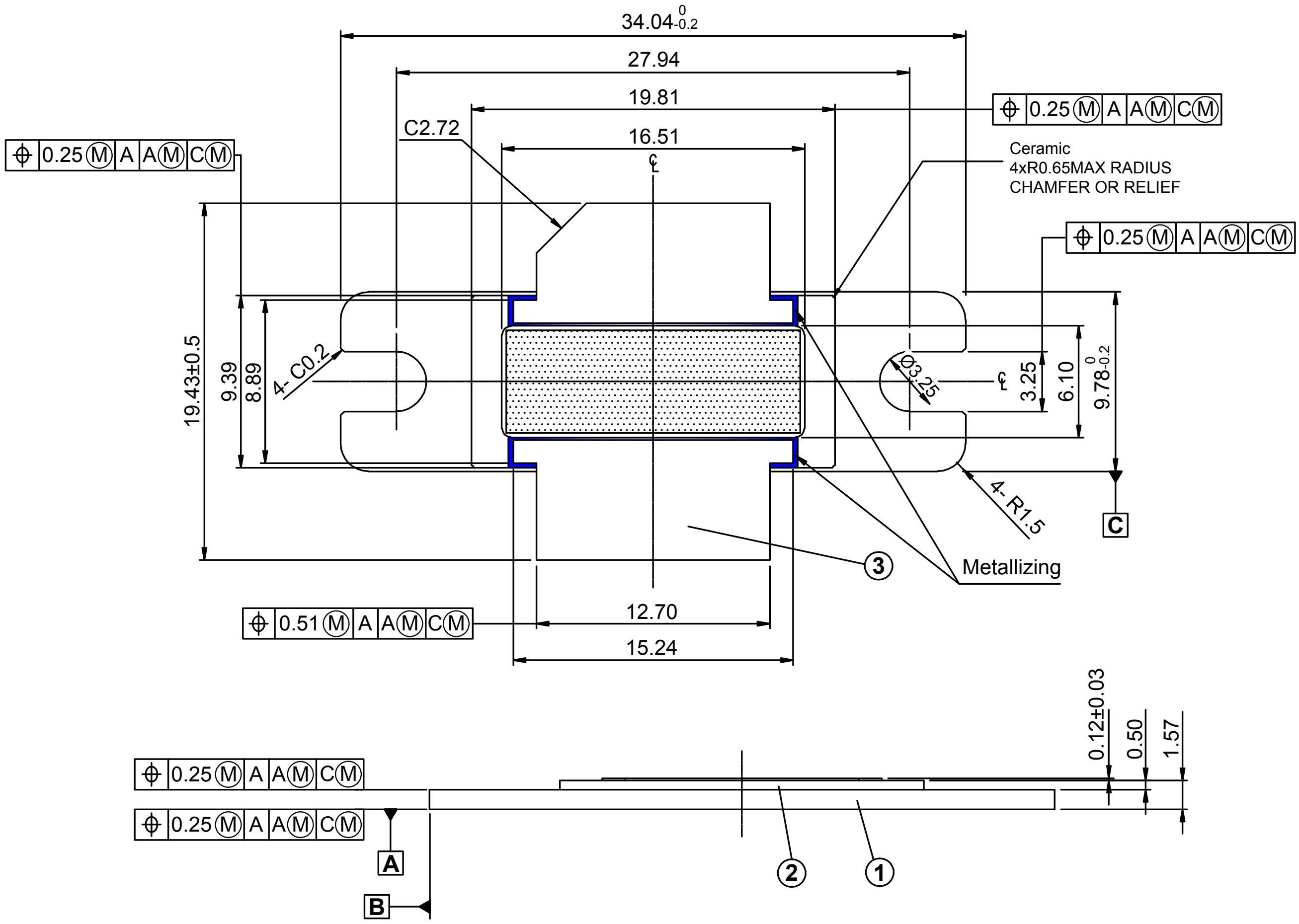
The KRFP340097 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

The KRFP340097 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Feature	Description
Frequency Band	S, C, X
Inner Dimension	16.51*6.1mm
Outer Dimension	19.81*9.39mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base

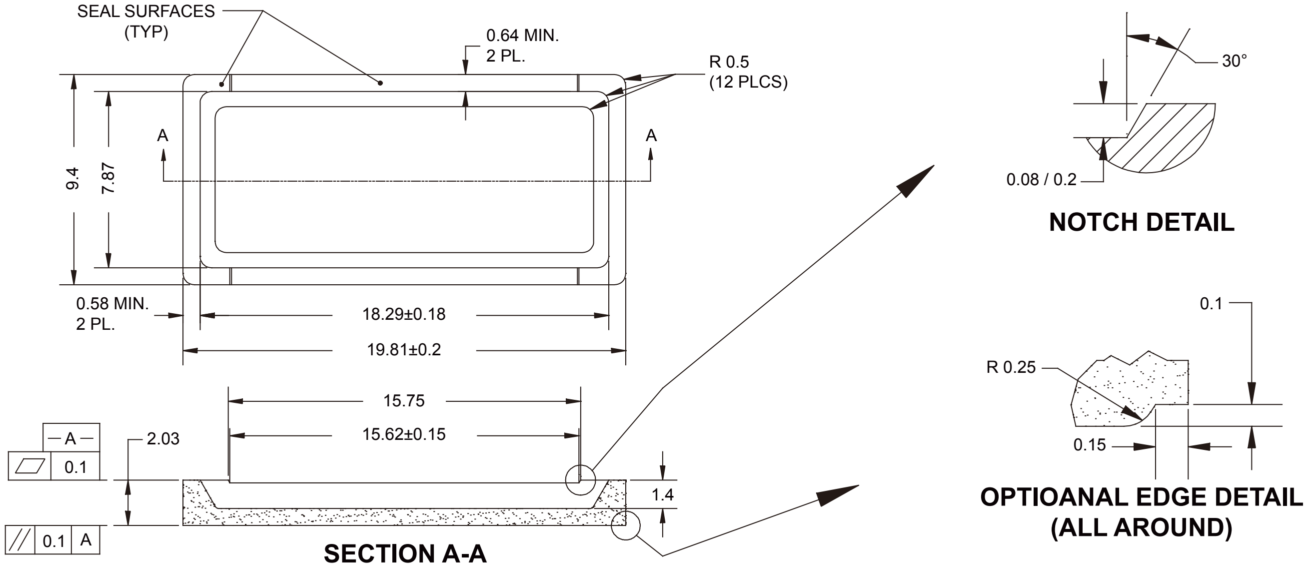


PLATING

	Au	Nico (Co content:8~40%)
DIE ATTACH PARTS	2.5μm MIN	2.5μm MIN
LEAD PARTS	1.143μm MIN	2.5μm MIN

3	LEAD FRAME	Alloy42
2	CERAMIC RING	Al_2O_3
1	FLANGE	CPC(1:4:1)
NO.	**PART NAME**	**MATERIAL**

Lid - SLID198094



NOTE

1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm
2. Epoxy applied 0.18 / 0.36 onto seal surfaces

KRFP340097-2

High Power,
Metal Ceramic RF Package

2022 issue

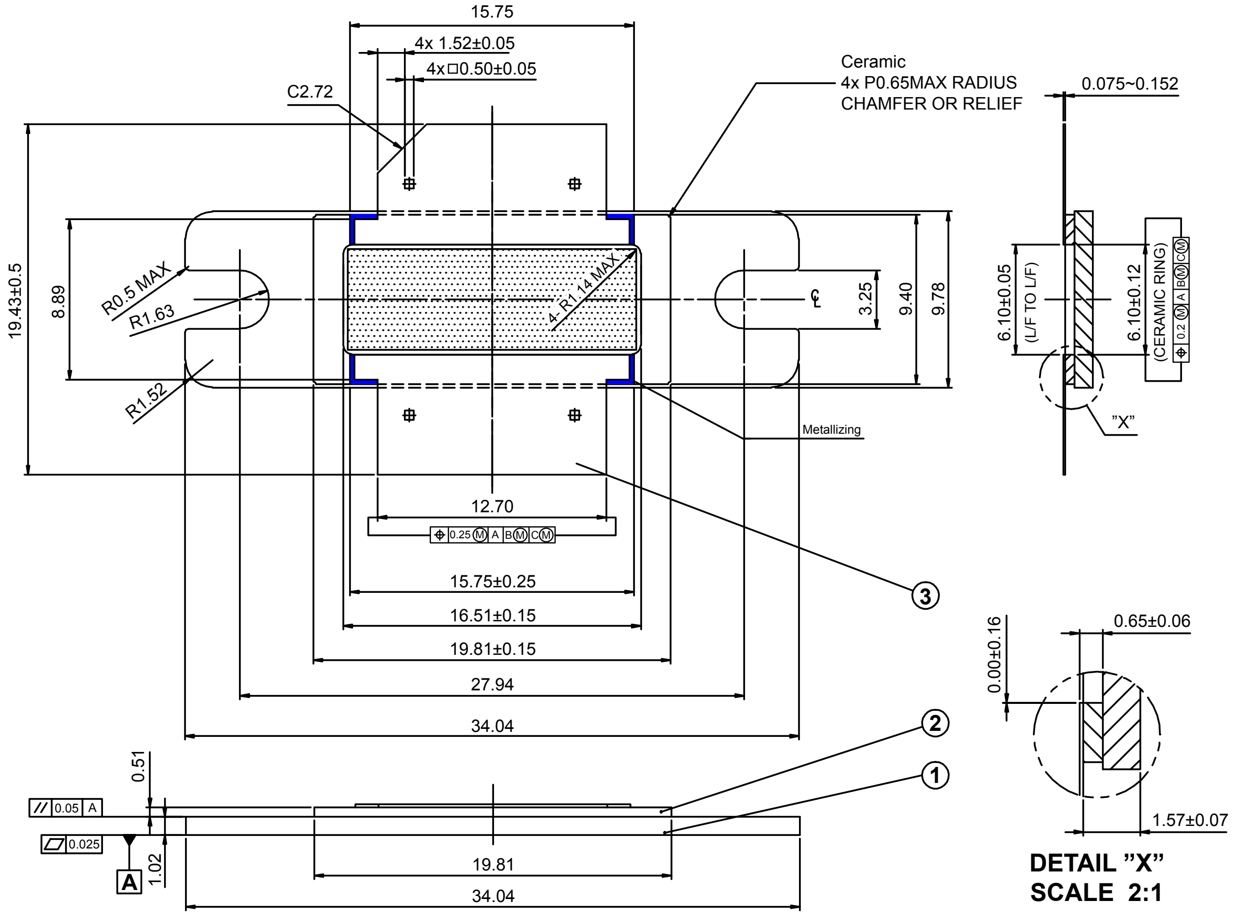
The KRFP340097-2 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability.

The KRFP340097-2 is a 2-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Package	
Frequency Band	S,C,X
Inner Dimension	16.51*6.1 mm
Outer Dimension	34.04*9.78 mm
Seal Method	B-stage Epoxy
Number of Leads	2

Dimension (Unit: mm)

Base

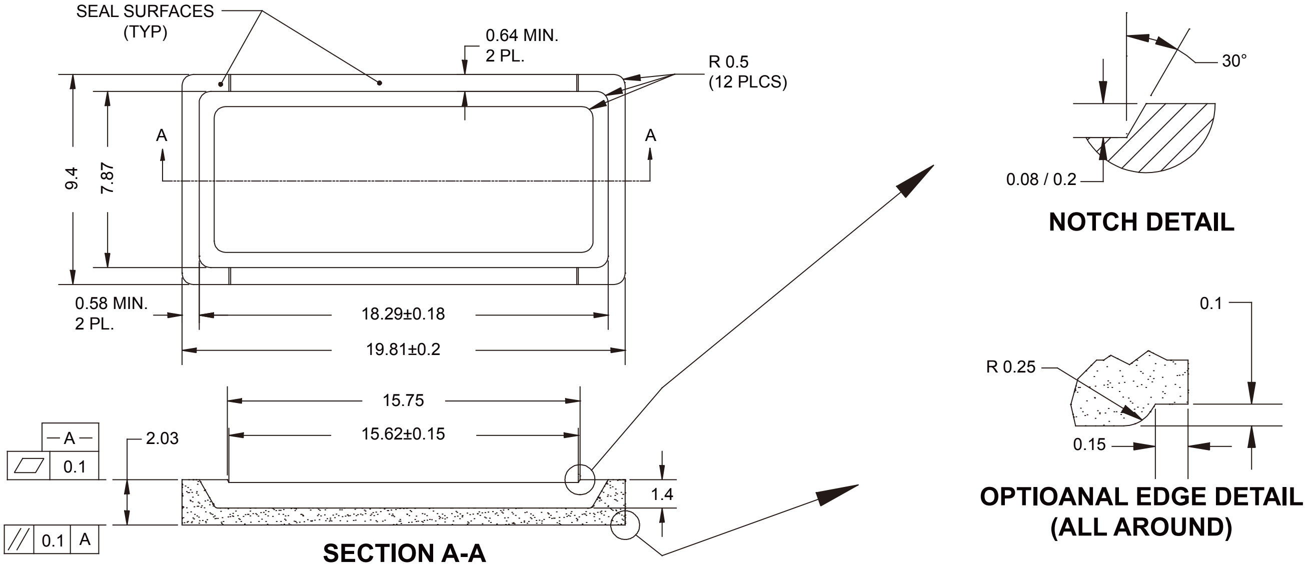


PLATING

	Au	Nico (Co content:8~40%)
Die Attach Parts	2.5μm MIN	2.5μm MIN
Lead Parts	1.0μm MIN	2.5μm MIN

NO.	**PART NAME**	**MATERIAL**
3	LEAD FRAME	Alloy42
2	CERAMIC	Al_2O_3
1	FLANGE	CPC141

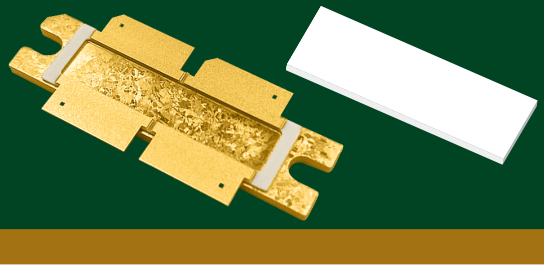
Lid - SLID198094



NOTE
1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm
2. Epoxy applied 0.18 / 0.36 onto seal surfaces

KRFP411094

High Power,
Metal Ceramic RF Package

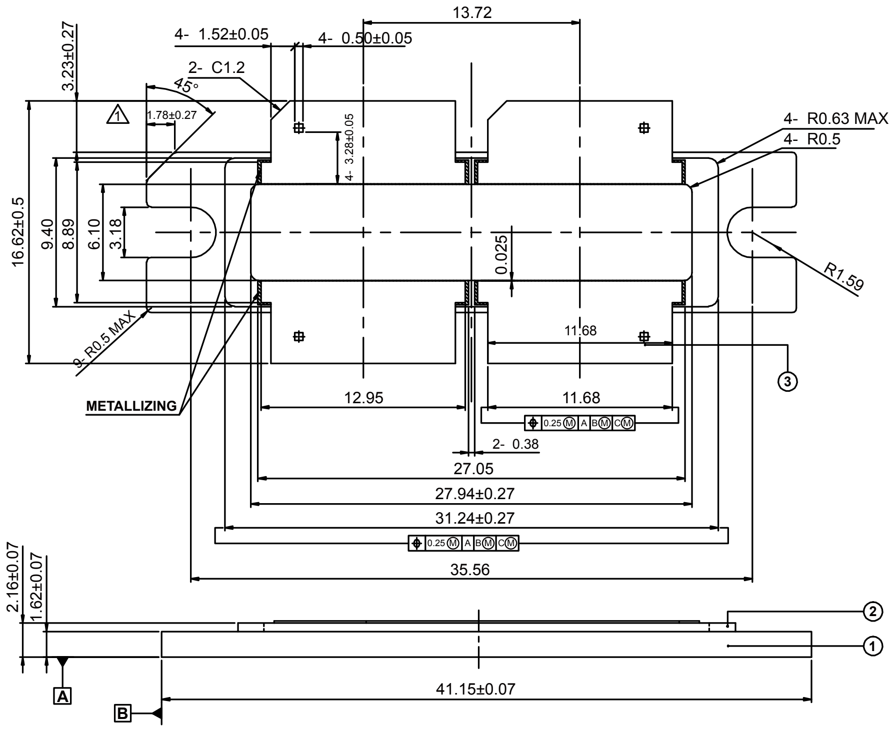


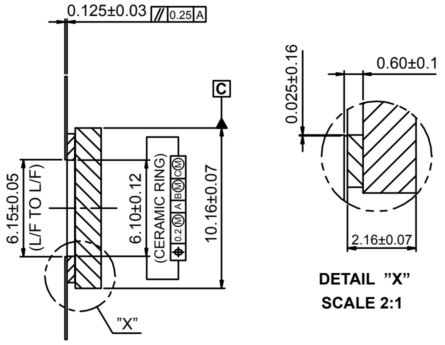
The KRFP411094 is ceramic air cavity package, which is suitable for GaN and GaAs RF Power transistors. It offers great performance and reliability. The KRFP411094 is a 4-leaded package with a cavity that is sized to accommodate extra matching circuitry. This package offers excellent thermal performance and its thermal expansion characteristics are well matched to most die.

Feature	Description
Frequency Band	S, C, X
Inner Dimension	27.94*6.1mm
Outer Dimension	31.24*9.4mm
Seal Method	B-stage Epoxy
Number of Leads	4

Dimension (Unit: mm)

Base





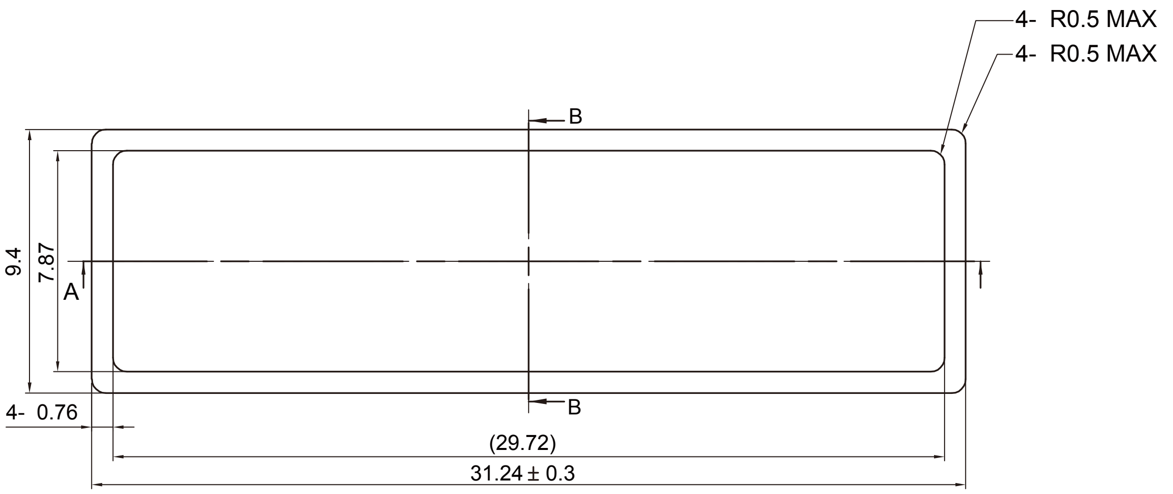
DETAIL "X"
SCALE 2:1

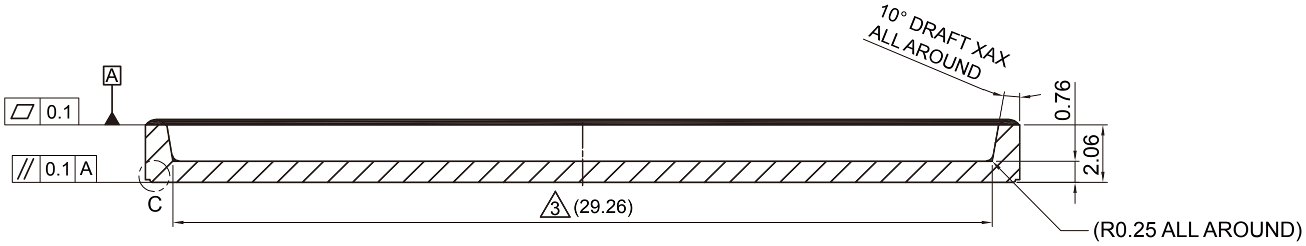
PLATING

	Au	Nico (Co content:8~40%)
DIE ATTACH PARTS	2.5μm MIN	2.5μm MIN
LEAD PARTS	1.143μm MIN	2.5μm MIN

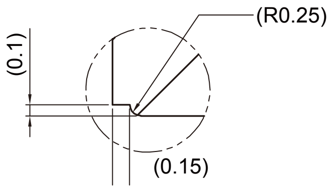
NO.	PART NAME	MATERIAL
3	LEAD FRAME	Alloy42
2	CERAMIC RING	Al_2O_3
1	FLANGE	CPC(1:4:1)

Lid - SLID312094

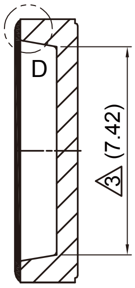




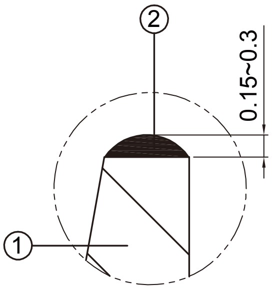
SECTION A-A



DETAIL C
SCALE 4:1
OPTIONAL EDGE
(ALL AROUND)



SECTION B-B



DETAIL B
SCALE 4:1

NOTE
1. MATERIAL
   1-1 White Ceramic Al_2O_3 96%
   1-2 B-staged Epoxy 0.15~ 0.25 mm
2. Epoxy applied 0.18 / 0.36 onto seal surfaces
3. All sharp corners R.010 Max.
4. Parts to be clean and free of forign material
5. Dimensioned to virtual sharp.

NO.	DESCRIPTION
2	B-STAGE EPOXY
1	LID

Eltrix

CERAMIC RF PACKAGE DATASHEET