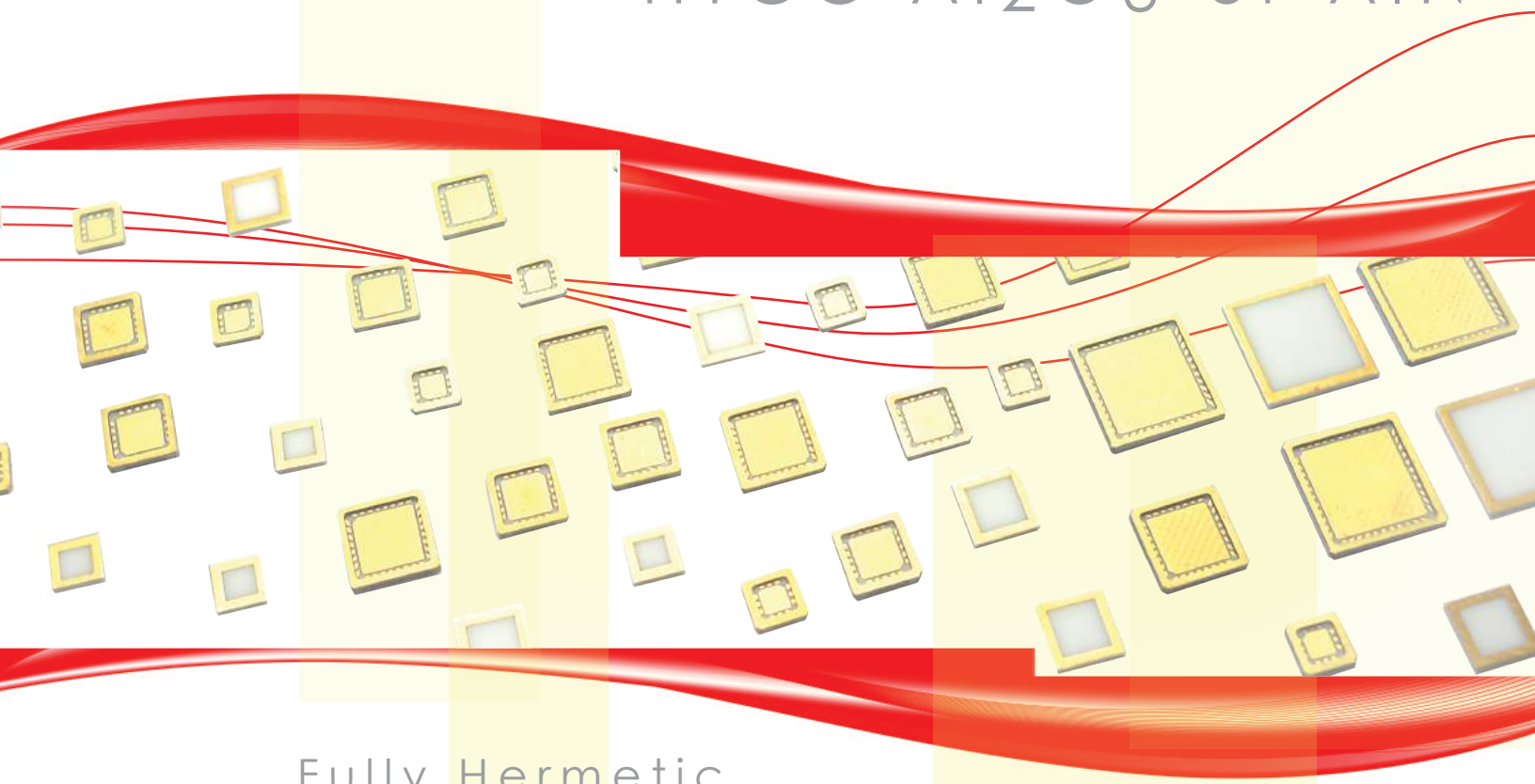
Ceramic QFN Family

To 40GHz

HTCC Al_2O_3 or AlN



Fully Hermetic

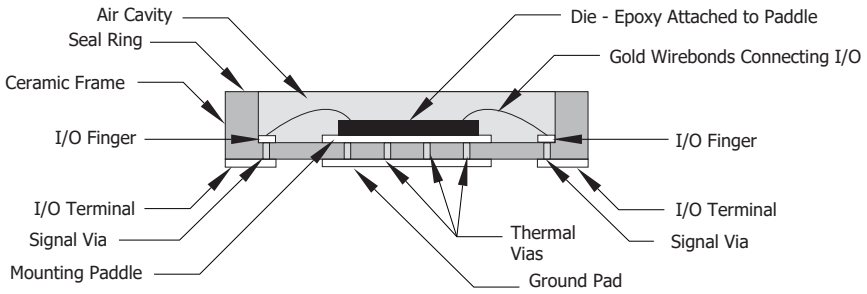
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Ceramic QFN Overview

- 6 Sizes: 3mm to 8mm
- HTCC Al_2O_3 or AlN
- Hermetically Sealable
- Air Cavity Design
- Broadband Performance
- RoHS Compliant
- Bare or Grounded Seal Ring
- Optional Castellations
- JEDEC MO-220 Footprint

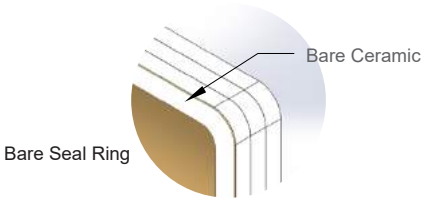


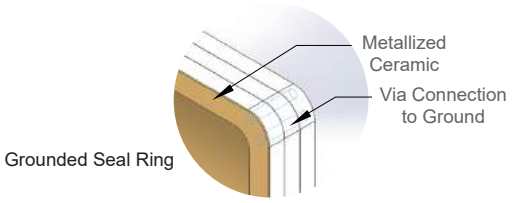
Ceramic QFN Sizes:

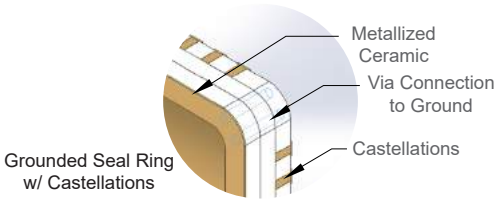


Size:	3mm	4mm	5mm	6mm	7mm	8mm
MO-220 Footprint:	VEED-5	VGGD-5	VHHD-5	VJJD-5	VKKD-5	VLLD
Standard Pin Count:	12	20	32	36	44	48

Ceramic QFN Configurations:

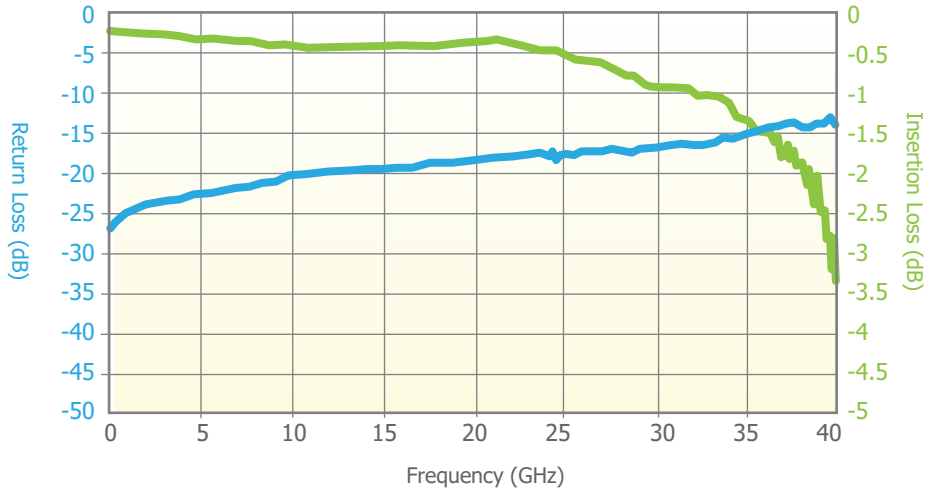






Ceramic QFN Performance Example:

This graph shows typical performance of a **5mm Ceramic QFN from DC-40GHz**. Insertion loss was measured through package with air line over ground plane.



Barry Industries Inc. is a leading manufacturer of ceramic components including attenuators, resistors, terminations, semiconductor packaging and custom thick film circuits.

For decades, leading providers of mission-critical devices have relied on Barry components.

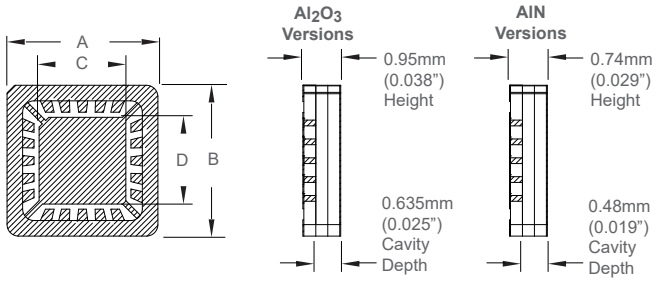
We are an ISO9001 certified, ITAR registered company with headquarters and manufacturing operations in Attleboro, Massachusetts. We invite you to visit our facility. We know that you will like what we have to show you.

-The Barry Team

ISO CERTIFIED **ITAR REGISTERED** **MADE IN USA**

Ceramic QFN Dimensions:

A	B	C	D	Pins	Pitch
3.0 (0.118)	3.0 (0.118)	1.35 (0.053)	1.35 (0.053)	12	0.5 (0.020)
4.0 (0.157)	4.0 (0.157)	2.30 (0.091)	2.30 (0.091)	20	0.5 (0.020)
5.0 (0.197)	5.0 (0.197)	3.30 (0.130)	3.30 (0.130)	32	0.5 (0.020)
6.0 (0.236)	6.0 (0.236)	4.22 (0.166)	4.22 (0.166)	36	0.5 (0.020)
7.0 (0.276)	7.0 (0.276)	5.22 (0.206)	5.22 (0.206)	44	0.5 (0.020)
8.0 (0.315)	8.0 (0.315)	6.22 (0.245)	6.22 (0.245)	48	0.5 (0.020)

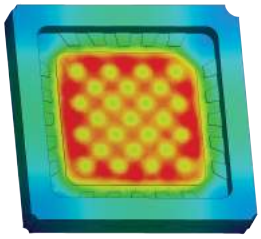


Dimensions Shown in mm (in)

Ceramic QFN Thermal Resistance:

Size	Al_2O_3	AIN
3mm	8.0°C/W	3.0°C/W
4mm	3.0°C/W	1.0°C/W
5mm	1.5°C/W	0.5°C/W
6mm	0.9°C/W	0.3°C/W
7mm	0.6°C/W	0.2°C/W
8mm	0.4°C/W	0.13°C/W

Al_2O_3 5mm QFN
1.5°C/W
Thermal Resistance



AIN 5mm QFN
0.5°C/W
Thermal Resistance



Ceramic QFN Ordering Information:

QFN - 33 12 - 05 21 PN = 3mm QFN with Grounded Seal Ring

Standard Sizes & Pin Counts:

- **33 12** = 3.0mm² QFN (0.118"²) with 12 Pins
- **44 20** = 4.0mm² QFN (0.157") with 20 Pins
- **55 32** = 5.0mm² QFN (0.197") with 32 Pins
- **66 36** = 6.0mm² QFN (0.236") with 36 Pins
- **77 44** = 7.0mm² QFN (0.276") with 44 Pins
- **88 48** = 8.0mm² QFN (0.315") with 48 Pins

Features:

- **20** = Bare Seal Ring
- **21** = Grounded Seal Ring
- **22** = Grounded Seal Ring w/ Castellations

HTCC Material:

- **05** = Al_2O_3
- **07** = AIN

Many other options & configurations available. Custom requests are our specialty!
All part illustrations are for reference purposes only.

- To 40GHz
- HTCC Al_2O_3 or AlN
- Fully Hermetic

BARRY

Ceramic QFN Family

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