

World Best Product

Key Components for IT & Energy Industry Based on
Advanced Materials

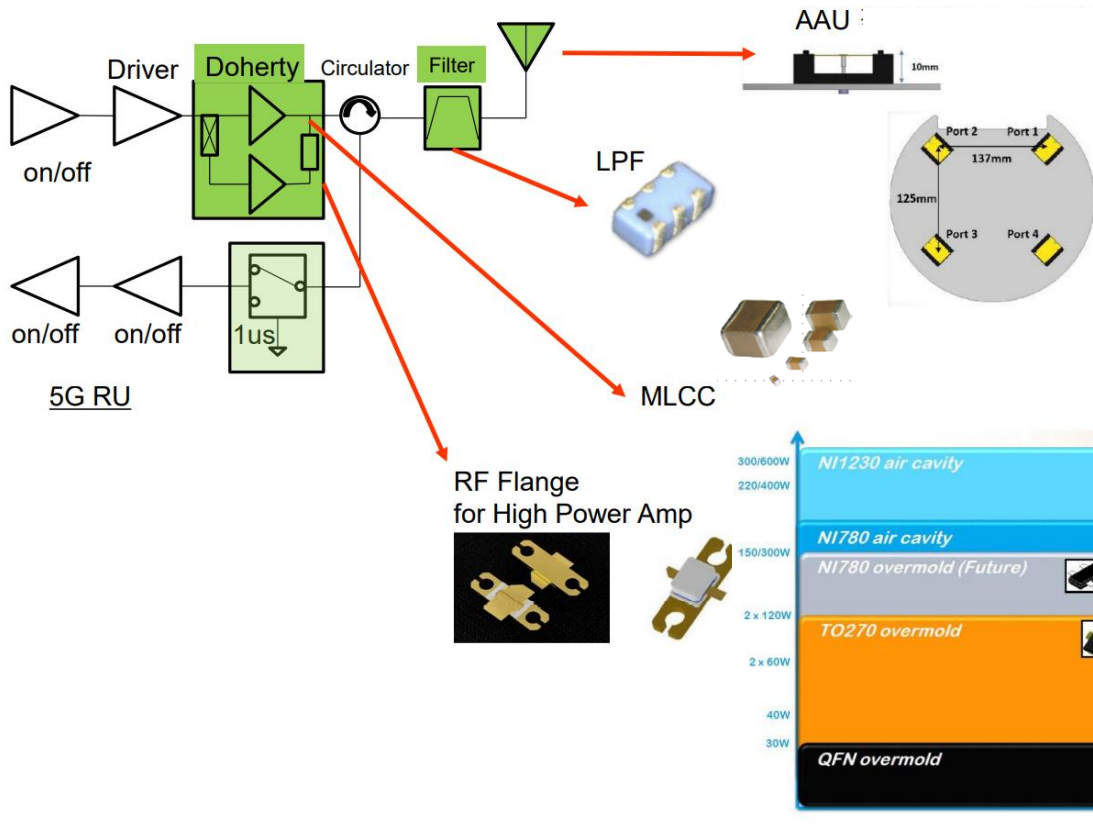


Base Station & Small Cell Application Guide

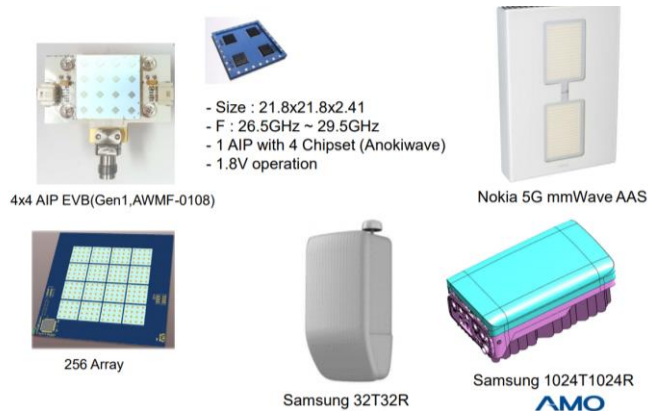


AMO 5G Solution

• AMO Sub-6GHz Solution



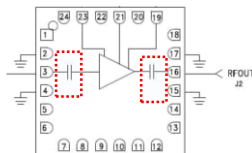
• AMO mmWave Solution



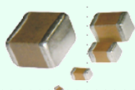
MLCC & Ceramic Components for 5G

5G Power amp.

-GaN
-LDMOS



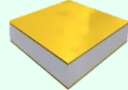
✓ 3 Term



✓ High Q

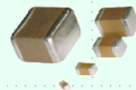


✓ BBC

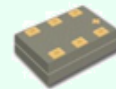


✓ SLC

Base station (SMALL/MACRO CELL)



✓ High Q



✓ Ceramic Bridge

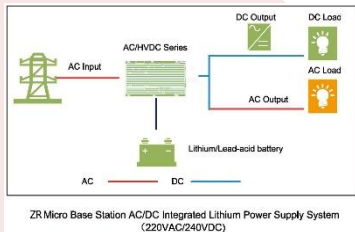


✓ Coupler



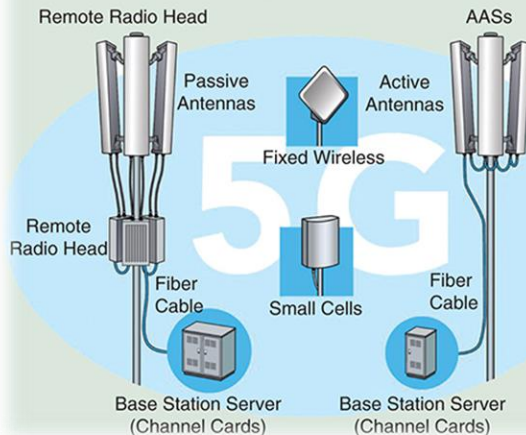
✓ ANT

Rectifier

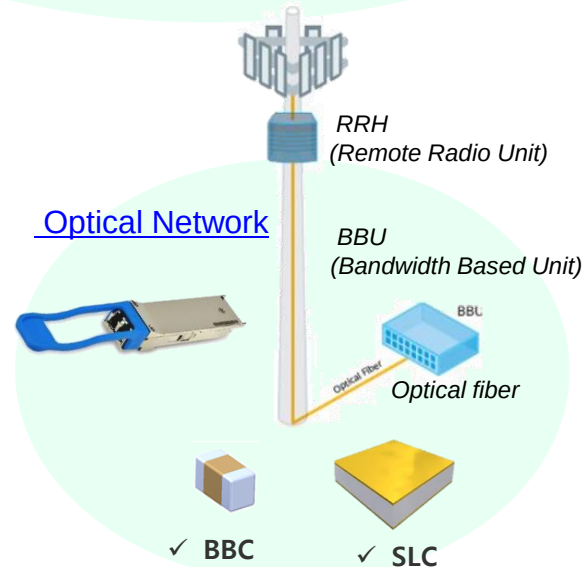


• Power MLCC

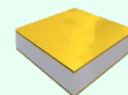
5G Solutions



Optical Network



✓ BBC



✓ SLC

Base station – Small cell

➤ ACQ (High Q) series

- High self resonance frequencies
- Stable C0G dielectric with PME (Precious Metal Electrode)

➤ ACS (125°C) series

- Large Cap. with X7R base
- Stable DC Bias characteristics

➤ Low power Coupler(2W)

- Low Insertion Loss
- LTCC base (Er=4.6)

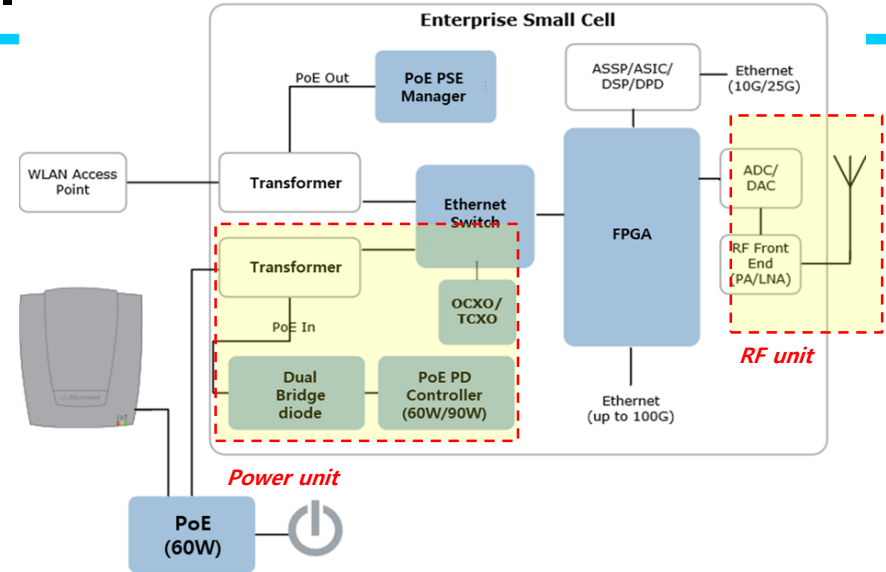
Main application

- Small cell / Repeater / Customer Premises Equipment (CPE)

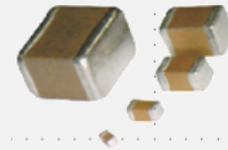
• Power unit



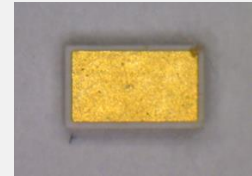
✓ ACS (Large cap, X7R)



• RF unit



✓ High Q MLCC
- Small size



✓ Low power Coupler(2W)

Base station - Small cell

**Large Cap.
MLCC
For Power
Unit**

Part No.	Size		Rated Voltage	Dielectric Material	Capacitance	Sample Status
	EIA (inch)	JIS (mm)				
ACS02X50N104KNDG	0402	1005	50V	X7R	0.1uF (104)	Sample Available
ACS05X50N104KNDG	0805	2012	50V	X7R	0.1uF (104)	
ACS06X25N106xNDG	1206	3216	25V	X7R	10uF (106)	

**High Q
MLCC
For RF Unit**

Part No.	Size		Rated Voltage	Dielectric Material	Capacitance	Sample Status
	EIA (inch)	JIS (mm)				
ACQ01X2BN□□□JADG	0201	0603	200V	C0G	0.1~10pF	Sample Available
ACQ02X2BN□□□JADG	0402	1005	250V	C0G	0.1~27pF	

**Small Size
Directional
Coupler
For RF Unit**

Part No.	Power Capacity Max. (Watt)	Freq. (MHz)	Mean Coupling (dB)	Insertion Loss Max. (dB)	Return Loss Max. (dB)	Directivity Min. (dB)	Sample Status
CBD0805A3000	2 W	2300-2400	20.0±1.00	-0.13	-23.68	-20	Sample Available
		2400-2500	20.0±1.00	-0.14	-23.23	-20	
		2630-2655	20.0±1.00	-0.15	-23.43	-20	
		3300-3700	20.0±1.00	-0.21	-21.58	-18	

Base station – Macro cell

➤ ACQ (High Q) series

- High self resonance frequencies
- Stable C0G dielectric with PME

➤ AFC (3-Terminal Filter) series

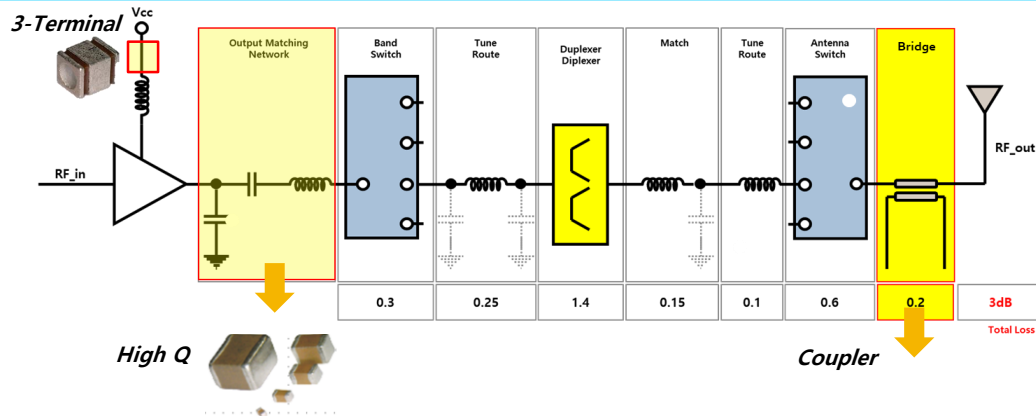
- Large Current
- Low ESL

➤ High power Coupler(80W)

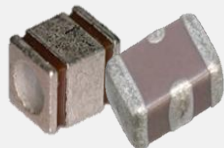
- Low Insertion Loss
- LTCC base (Er=4.6)

Main application

- MACRO CELL RF matching network

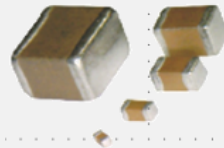


• Feed -Thru capacitor for DC BIAS



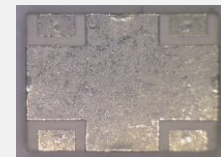
✓ AFC / AFX series

• High Q MLCC for RF Power Amp.



✓ ACQ (High Q)

• RF Antenna unit



✓ High power Coupler(80W)

Base station – Macro cell

**Feed - thru
capacitor
for DC Bias**

Part No.	Size		Rated Voltage	Rated Current	Capacitance	Sample Status
	EIA (inch)	JIS (mm)				
AFC16S03A104MPD	0603	1608	16V	1A	0.1uF (104)	Sample Available
AFC16S03A223MCD	0603	1608	16V	2A	0.022uF (223)	
AFC25F06E155MPL	1806	4516	25V	6A	1.5uF (155)	
AFC50S06E184SPL	1806	4516	50V	6A	0.18uF (184)	
AFX1BS10F102SPL	1210	3225	100V	20A	0.001uF (102)	

**High Q
MLCC for
RF Power
Amp.**

Part No.	Size		Rated Voltage	Dielectric Material	Capacitance	Sample Status
	EIA (inch)	JIS (mm)				
ACQ03X2BN□□□JADG	0603	1608	250V	C0G	0.1~100pF	Sample Available
ACQ05X2BN□□□JALG	0805	2012	250V	C0G	10~240pF	
ACQ11X5BN□□□JALG	1111	2828	500V	C0G	1.2~100pF	End of August

**High power
Directional
Coupler**

Part No.	Power Capacity Max. (Watt)	Freq. (MHz)	Mean Coupling (dB)	Insertion Loss Max. (dB)	Return Loss Max. (dB)	Directivity Min. (dB)	Sample Status
CBD2520B3500	80W	3400-3600	20.0±0.5	-0.24	-36.16	-28	TBA
		3400-3500	20.0±0.5	-0.23	-34.30	-28	
		3500-3600	20.0±0.5	-0.24	-36.16	-28	

DC Power Supply solution

➤ ACS series (125°C)

- Large Cap. with high Voltage
- Suitable for GaN/ LDMOS application

➤ AC2 series (125°C)

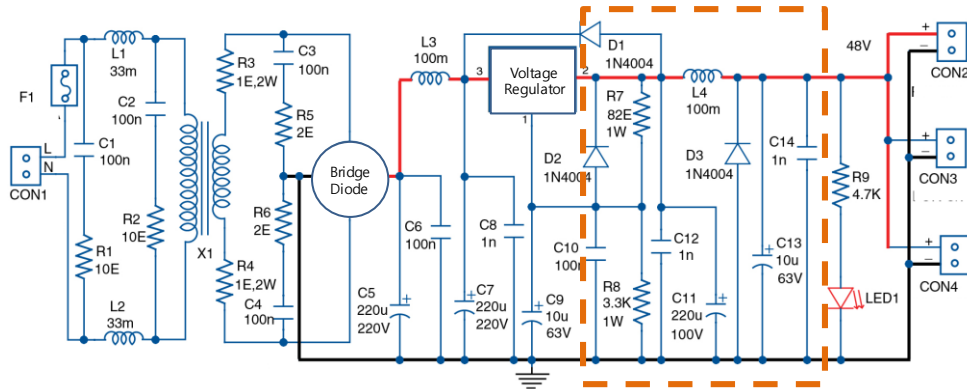
- Stable DC-Bias characteristics

➤ ACE/AC5 (150°C) series

- High temperature type

Main application

- DC power supply, Rectifier



DC Power Supply solution

MLCC for Power supply

Part No.	Size		Rated Voltage	Dielectric Material	Capacitance	Sample Status
	EIA (inch)	JIS (mm)				
ACS06X50N475xNDG	1206	3216	50V	X7R	4.7uF (475)	End of August
ACS10X50N106xNDG	1210	3225	50V	X7R	10uF (106)	End of July
ACS06X1BN225xNDG	1206	3216	100V	X7R	2.2uF (225)	

Stable DC-Bias

Part No.	Size		Rated Voltage	Dielectric Material	Capacitance	Sample Status
	EIA (inch)	JIS (mm)				
AC206X1BN225xNDG	1206	3216	100V	X7S	2.2uF (225)	End of August
AC206X1BN475xNDG	1206	3216	100V	X7S	4.7uF (475)	
AC210X1BN475xNDG	1210	3225	100V	X7S	4.7uF (475)	
AC210X1BN106xNDG	1210	3225	100V	X7S	10uF (106)	

High temperature

Part No.	Size		Rated Voltage	Dielectric Material	Capacitance	Sample Status
	EIA (inch)	JIS (mm)				
AC510X50N106xNDG	1210	3225	50V	X8L	10uF (106)	TBA
AC510X1BN475xNDG	1210	3225	100V	X8L	4.7uF (475)	
ACE10X50N225xNDG	1210	3225	50V	X8R	2.2uF (225)	

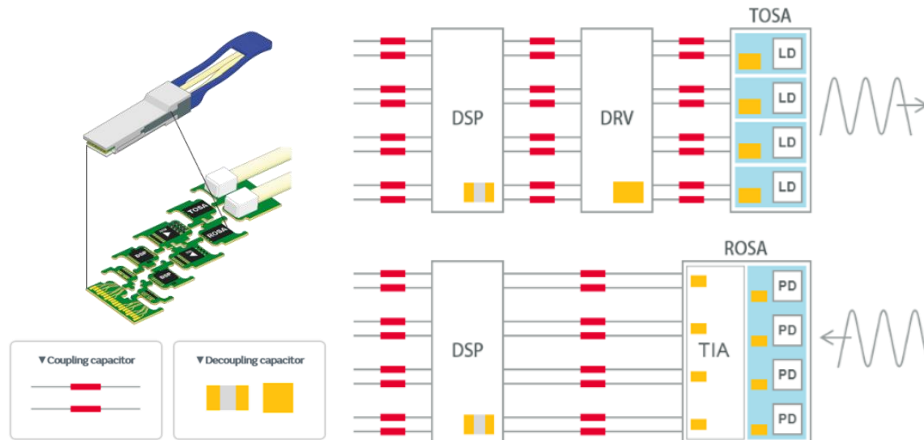
Optical Network

➤ ABC U series (Broadband capacitor)

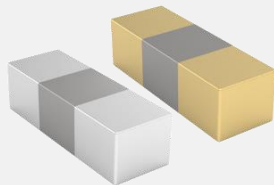
- Wide frequency range DC blocking (Up to 40GHz)
- Low insertion loss

Main application

- OPTICAL Transceiver
- mmWAVE Transmitter



• Normal type



✓ 0402 inch (1005mm) size

• Compact type



✓ 0201 inch (0603 mm) size

• Miniature type



✓ 01005 inch (0402 mm) size

Base station - Optical Network

Normal type

Part No.	Size		Rated Voltage	Dielectric Material	Capacitance	Terminal	Sample Status
	EIA (inch)	JIS (mm)					
ABC UA 102 02X 104K NDG	0402	1005	10V	X7S	0.1uF(104)	Ni/Sn	Sample Available
ABC UA 102 02X 104K GDG	0402	1005	10V	X7S	0.1uF(104)	Au	
ABC UA 16F 02X 104K NDG	0402	1005	16V	X5R	0.1uF(104)	Ni/Sn	
ABC UA 16F 02X 104K GDG	0402	1005	16V	X5R	0.1uF(104)	Au	

Compact type

Part No.	Size		Rated Voltage	Dielectric Material	Capacitance	Terminal	Sample Status
	EIA (inch)	JIS (mm)					
ABC UA 10S 01X 104K NDG	0201	0603	10V	X7R	0.1uF(104)	Ni/Sn	Sample Available
ABC UA 10S 01X 104K GDG	0201	0603	10V	X7R	0.1uF(104)	Au	
ABC UA 102 01X 103P NDG	0201	0603	10V	X7S	0.01uF(103)	Ni/Sn	
ABC UA 102 01X 103P GDG	0201	0603	10V	X7S	0.01uF(103)	Au	

Miniature type

Part No.	Size		Rated Voltage	Dielectric Material	Capacitance	Terminal	Sample Status
	EIA (inch)	JIS (mm)					
ABC UA 06F 0XX 103M NDG	01005	0402	6.3V	X5R	0.01uF(103)	Ni/Sn	Sample Available
ABC UA 06F 0XX 103M GDG	01005	0402	6.3V	X5R	0.01uF(103)	Au	TBA
ABC UA 06F 0XX 473M NDG	01005	0402	6.3V	X5R	0.047uF(473)	Ni/Sn	Sample Available
ABC UA 06F 0XX 473M GDG	01005	0402	6.3V	X5R	0.047uF(473)	Au	TBA