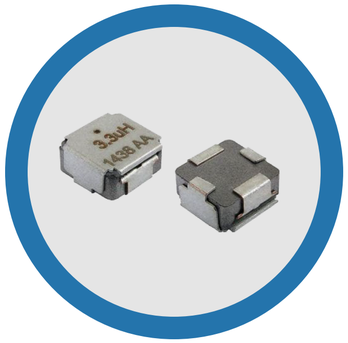
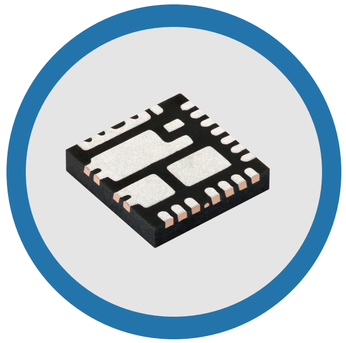
5G

5G mm Wave Base Station
Power Supplies
Highest Efficiency / RF Noise Levels

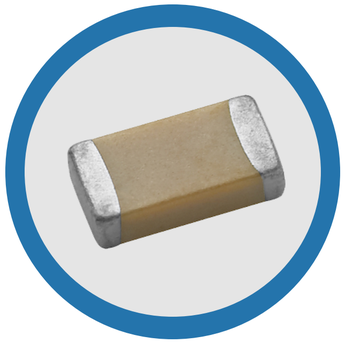
How to Enable the Highest Range and Best Reception



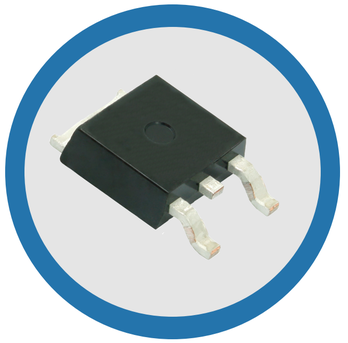
Low Profile,
High Current Inductors
With E-Field Shield
IHLE®



microBUCK® DC/
DC Converter
SiC437, SiC438



Surface-Mount Multilayer Ceramic Chip
Capacitors for High Frequencies
MLCC HiQ Capacitors

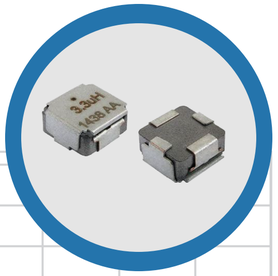


Flexible Ultrafast Platform for
Power Supplies and Inverters
FRED Pt® Series: 200 V to 600 V

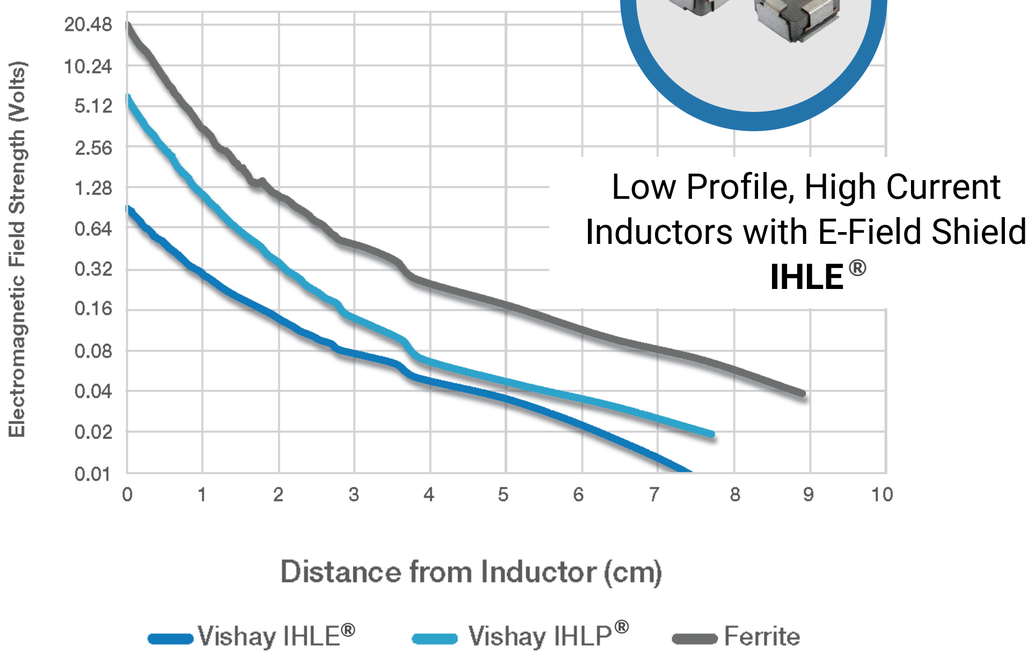
Power Supplies for 5G Small Cells

Picocell / Metrocell / Microcells Require 1 W / 5 W / 10 W of RF TX Power, i.e. 5 W to 100 W of Input DC Power

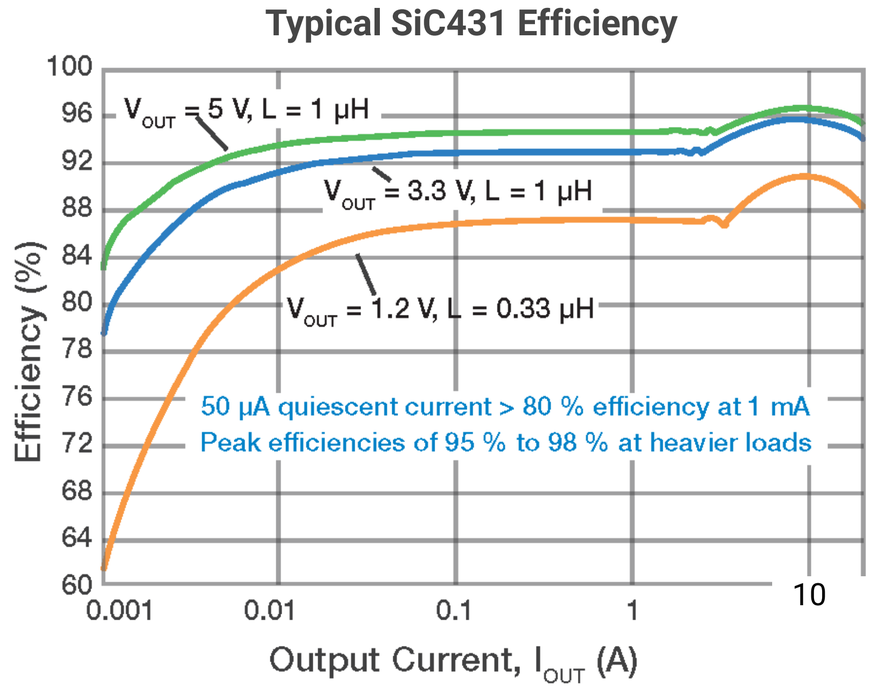
E-FIELD SHIELDED INDUCTOR



Low Profile, High Current
Inductors with E-Field Shield
IHLE®

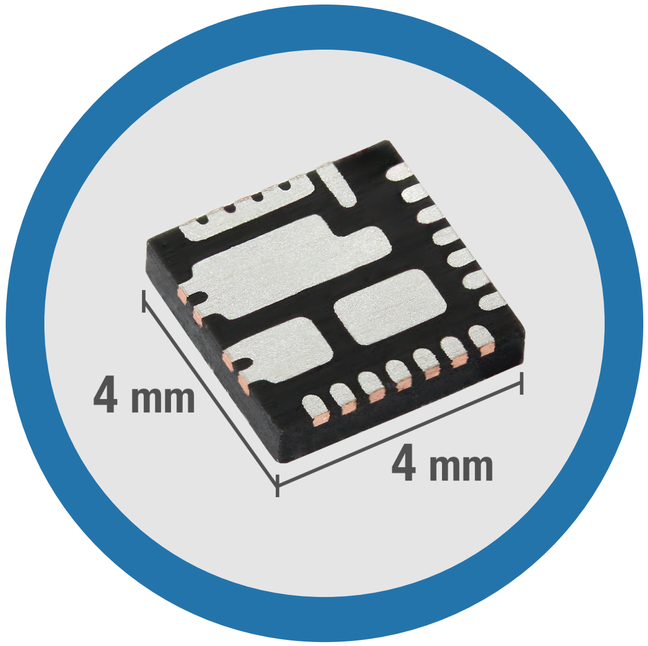


HIGHLY EFFICIENT BUCK CONVERTERS FOR ALL SMALL CELL BASE STATIONS



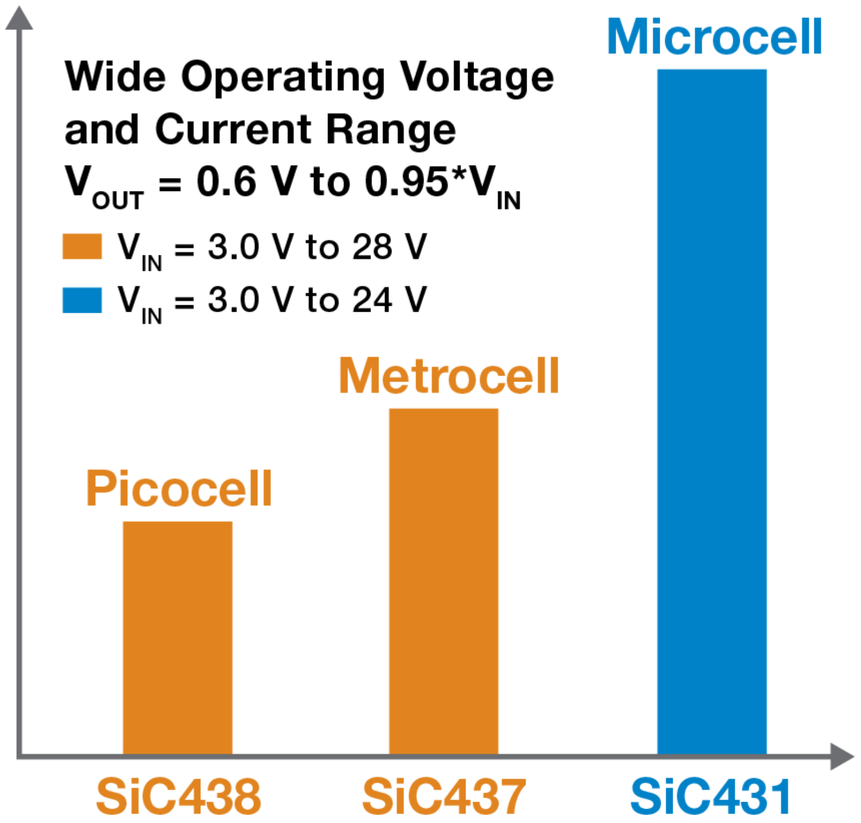
High Operating Temperature Range from -40 °C to +125 °C

INTERNALLY COMPENSATED WITH THE WIDEST OPERATING RANGE



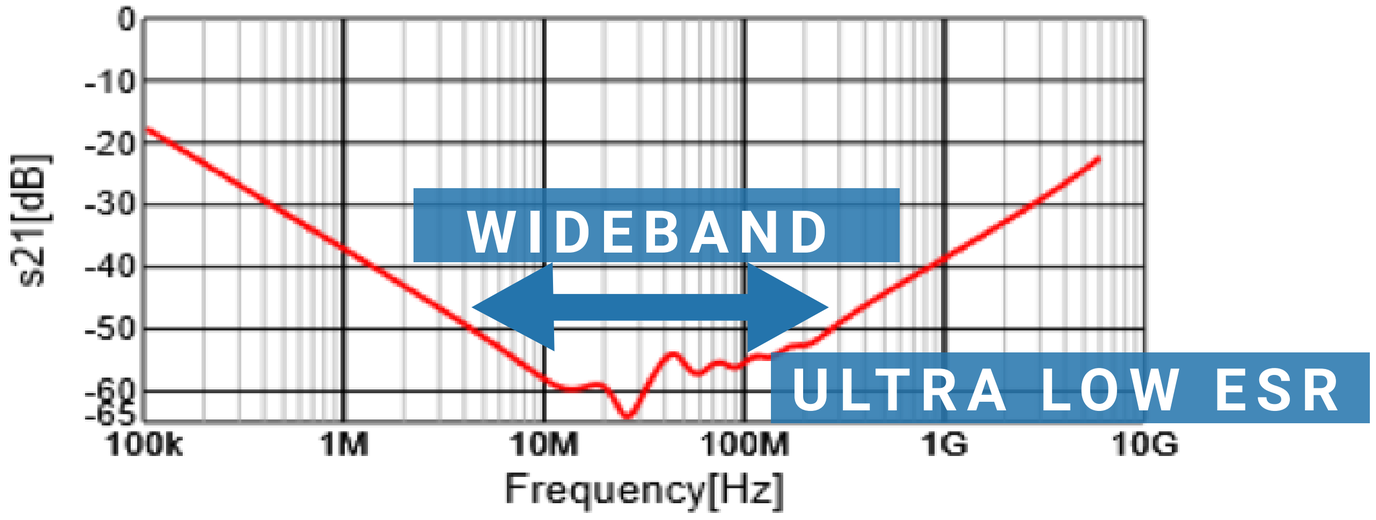
microBUCK® DC/DC Converter
SiC431

VERSATILE



PSRR: Reject Spurious Switching by 50 dB

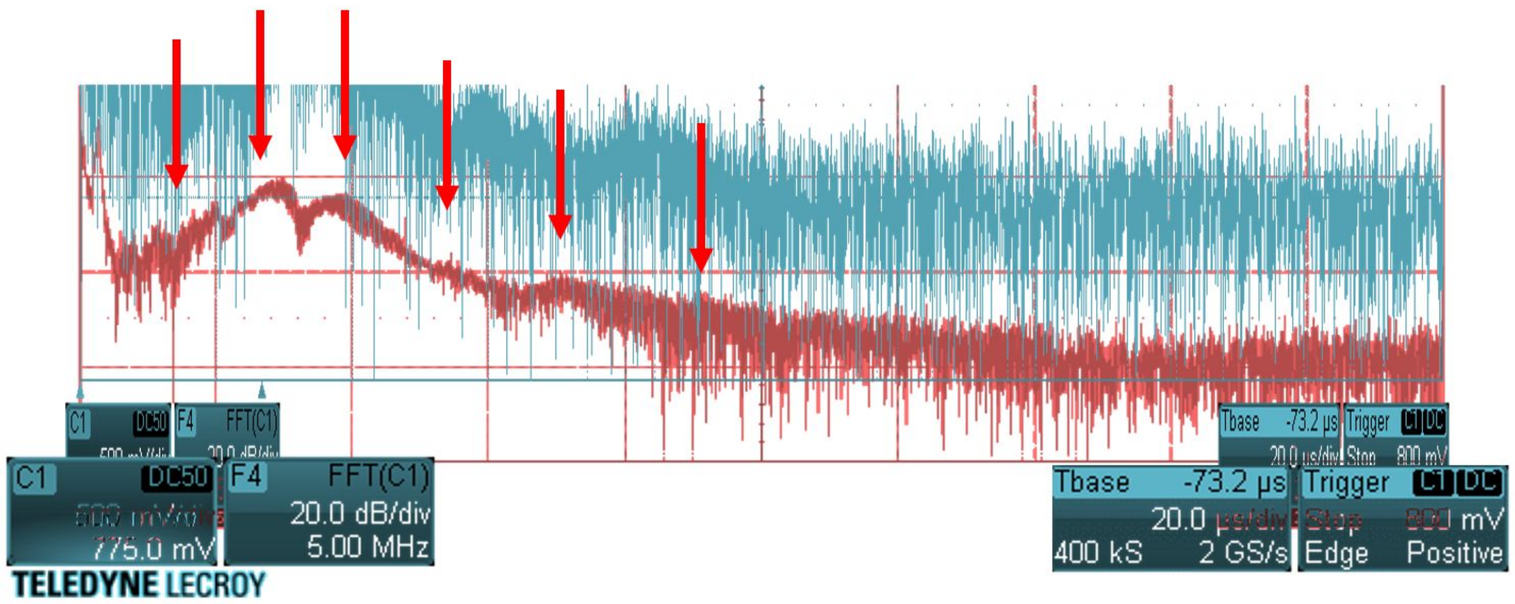
Achieve Wideband Filtering With Ultra Low ESR Filter Capacitors

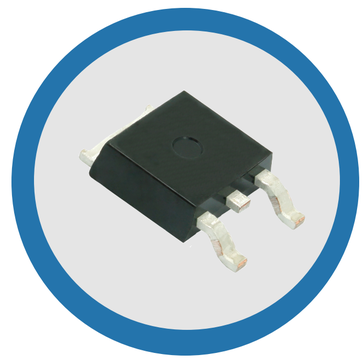


Surface-Mount Multilayer Ceramic Chip Capacitors for High Frequency MLCC HiQ Capacitors

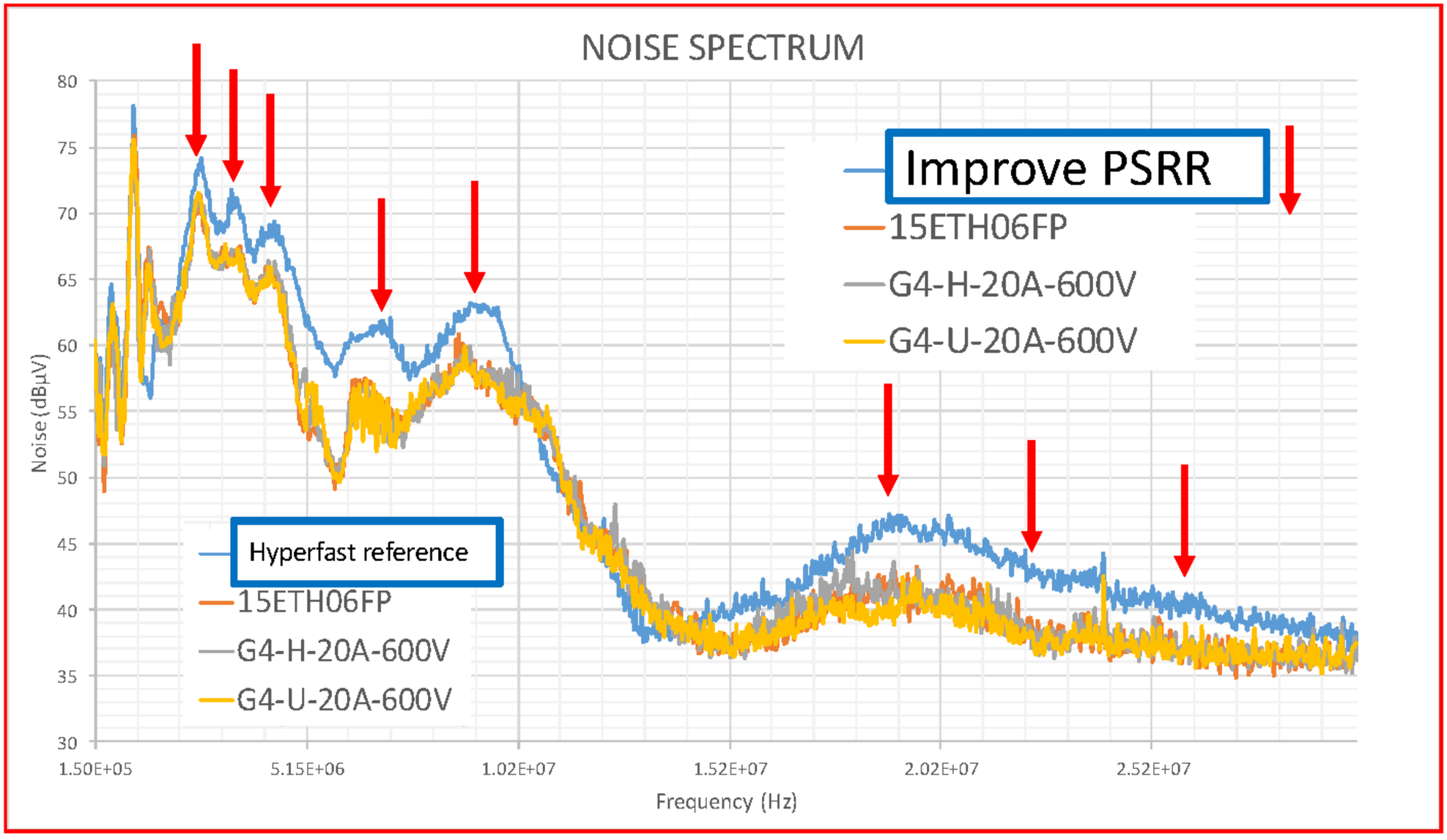
Soft Recovery Diodes to Lower the RF Noise Floor for AC/DC SMPS

Soft Recovery Diodes to Improve PSRR and RF Noise Floor

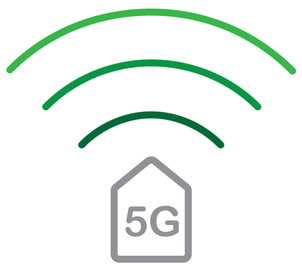




FRED Pt® Series
200 V to 600 V


NOISE SPECTRUM
Improve PSRR
15ETH06FP
G4-H-20A-600V
G4-U-20A-600V
Hyperfast reference
15ETH06FP
G4-H-20A-600V
G4-U-20A-600V
Noise (dBµV)
80
75
70
65
60
55
50
45
40
35
30
1.50E+05
5.15E+06
1.02E+07
1.52E+07
2.02E+07
2.52E+07
Frequency (Hz)

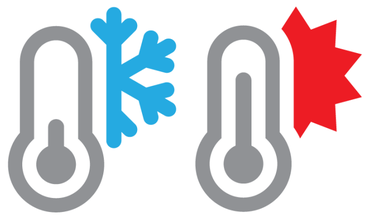
ADVANTAGES



Improved coverage – higher range

Low loss / high efficiency

Low noise



Ambient temperature
-40 °C to +125 °C

ADVANTAGES of Dedicated Noise Suppressing Components

Improved EMI / PSRR
(Power Supply Reject Ratio)

- Lower RF noise floor for higher range in RX
- Improves connectivity / QoS

Optimized Efficiency for 5G Small Cells

- 95 % to 98 % efficiency for pico + micro + metro cells
- Lower heat dissipation

5G RANGE

HiQ Capacitors

Low Noise Components

EMI Proof

5G QoS

Energy Efficient

ENYCAP™ Backup Battery

Temperature Stability

APPLICATIONS

5G Base Stations
5G Routers
AC/DC SMPS

5G Small Cells
IoT Devices

5G Infrastructure

Need Technical Support? Email our Vishay Application Experts

IG13542037-1912