INDUSTRY

# Blade Servers

Electronic Components
KEMET
CHARGED.

## Why Choose KEMET

KEMET Corporation is a leading global supplier of electronic components. We offer our customers the broadest selection of capacitor technologies in the industry, along with an expanding range of electromechanical devices, electromagnetic compatibility solutions and supercapacitors. Our vision is to be the preferred supplier of electronic component solutions for customers demanding the highest standards of quality, delivery and service.

## Trends

- Compact design
- Increased density
- Customizability
- Integrated solid state drives
- Low power

## Circuit Conditions

- Storage temperature of 40°C – 65°C
- Working temperature of 10°C – 35°C
- Storage humidity of 5% – 95%
- Working humidity of 8% – 80%
- Input/output voltage of 12 VDC/1 – 5 VDC

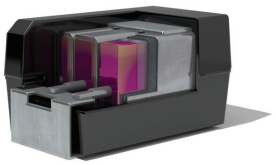
## Capacitor Requirements

- Low ESR and ESL
- High ripple current capability
- High capacitance
- Surge current capabilities
- Low profile

**For more information, samples and engineering kits, please visit us at www.kemet.com or call 1.877.myKEMET.**

## Applications

- High speed servers
- DC/DC converters
- Decoupling
- Portable electronics
- Defense and aerospace
- Microprocessors
- High ripple current application



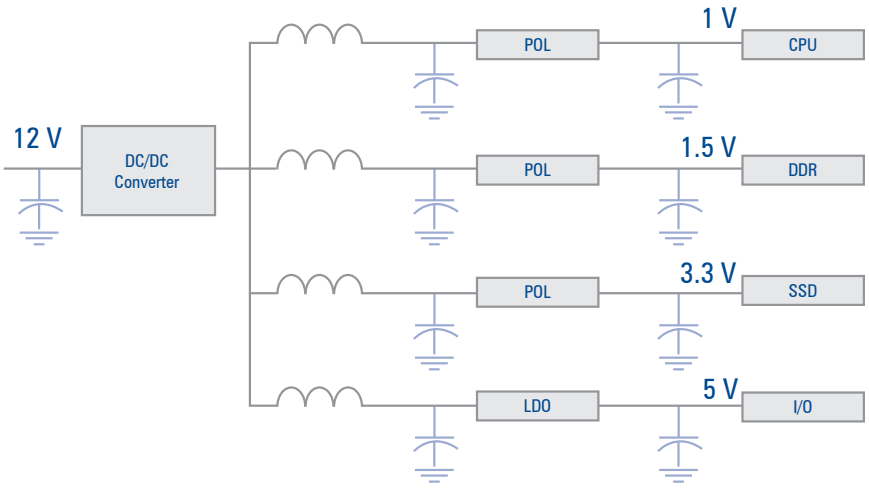
Polymer Capacitors

## Overview

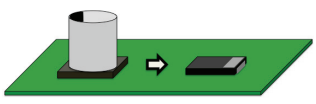
Today's internet applications are hosted on blade servers installed in data centers around the world. The mass proliferation of blade servers demand low-cost components available in low-profile heights. While idle, the blade server CPUs will enter into low-power mode.

Polymer capacitors provide the energy needed when active components transition into high-performance modes at a moment's notice. The KEMET T520 Polymer and T530 High Capacitance Polymer Series offer excellent volumetric efficiencies, reliable operation and long life. The T528 Low ESL Facedown Terminal Polymer can be used specifically for decoupling a high performance CPU with an impressive low profile height.

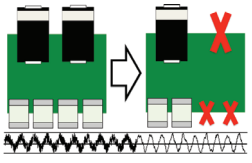
For operating temperatures below 85°C, X5R is a good choice for high capacitance ceramics. Surface mount aluminum electrolytic capacitors such as the KEMET EXV Series can provide the large bulk capacitance needed for decoupling from backplane power rails.




## Feature Highlights



Low Profile



Low ESR Low ESR/ESL

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## Frequently Selected Part Numbers: Input (12V – 48V)

| Series | Part Number | Capacitance | Voltage | ESR | Ripple | Size |
|---|---|---|---|---|---|---|
| T521 | T521V686M016ATE050 | 68 µF | 16 V | 50mOhm | 1.9A rms | 7343-20 |
| T521 | T521D107M016ATE050 | 100 µF | 16 V | 50mOhm | 2.1A rms | 7343-31 |
| T521 | T521X337M016ATE025 | 330 µF | 16 V | 25mOhm | 3.1A rms | 7343-43 |
| T521 | T521X156M063ATE035 | 15 µF | 63 V | 35mOhm | 2.6A rms | 7343-43 |

## Frequently Selected Part Numbers: CPU/DDR (1.0V – 1.9V)

| Series | Part Number | Capacitance | Voltage | ESR | Imp | Ripple | Size |
|---|---|---|---|---|---|---|---|
| T520 | T520V477M2R5ATE006 | 470 µF | 2.5 V | 6mOhm | 1.8nH @ 20MHz | 5.6A rms | 7343-19 |
| T528 | T528Z477M2R5ATE005 | 470 µF | 2.5 V | 5mOhm | .5nH @ 20MHz | 8.1A rms | 7343-17 |
| T528 | T528B277M2R5ATE005 | 270 µF | 2.5 V | 5mOhm | .5nH @ 20MHz | 3.9A rms | 3528-20 |
| T530 | T530Y687M2R5ATE005 | 680 µF | 2.5 V | 5mOhm | 2.2nH @ 20MHz | 7.3A rms | 7343-40 |
| T530 | T530X158M2R5ATE005 | 1500 µF | 2.5 V | 5mOhm | 2.4nH @ 20MHz | 7.3A rms | 7343-43 |

## Frequently Selected Part Numbers: I/O / USB / SSD (3.3V – 5.0V)

| Series | Part Number | Capacitance | Voltage | ESR | Ripple | Size |
|---|---|---|---|---|---|---|
| T520 | T520B157M006ATE035 | 150 µF | 6.3 V | 35mOhm | 1.9A rms | 3528-20 |
| T520 | T520B227M006ATE025 | 220 µF | 6.3 V | 25mOhm | 2.3A rms | 3528-20 |
| T520 | T520V337M006ATE015 | 330 µF | 6.3 V | 15mOhm | 3.5A rms | 7343-19 |
| T545 | T545H108M006ATE055 | 1000 µF | 6.3 V | 55mOhm | 1.8A rms | 7260-20 |
| T545 | T545H158M006ATE055 | 1500 µF | 6.3 V | 55mOhm | 1.8A rms | 7260-20 |

RoHS Pb Lead-free HF Halogen Free