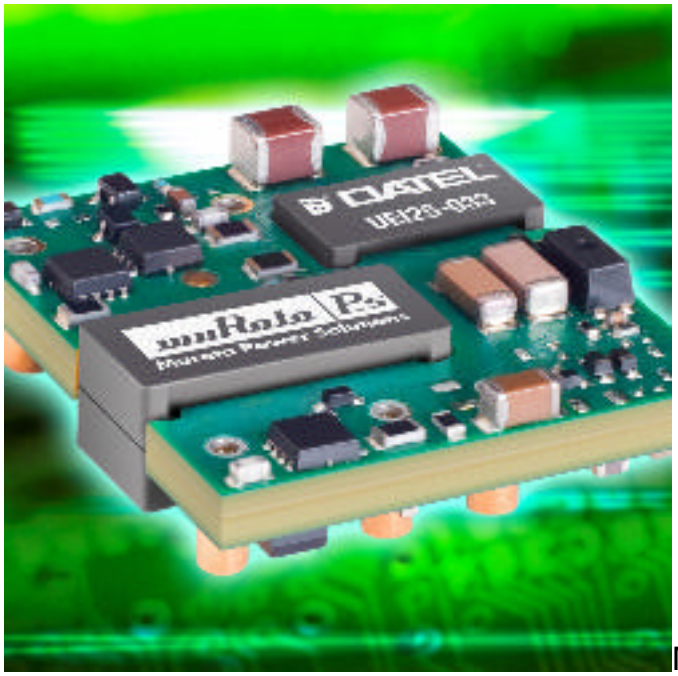
25 W Low-Profile Open-Frame DC-DC Converters



Murata Power Solutions announced today additions to its UEI25 series of 25W output, 2:1 input range, high efficiency, isolated DC-DC converters. Featuring 25W output in one square inch of board area, the new devices add +3.3VDC and +5VDC output models to the series. A +12VDC model was launched in 2010. All converters can now be specified in either surface mount or through-hole packages.
The low-profile converters, measuring just 24.38 x 27.94 x 8.13mm (0.96 x 1.1 x 0.32 inches), accept a 2:1 input voltage range of +36 to +75VDC, ideal for telecom equipment. The series also features an output trim function that allows the output to be trimmed up or down by 10% with an external trim resistor. The highly efficient operation, of up to 91%, ensures minimal heat buildup without the need for a fan-assisted air flow.

These DC-DC converters include full magnetic isolation with Basic insulation, up to 2250VDC. For powering digital systems, the outputs offer fast settling to step transients and will accept higher capacitive loads. Excellent ripple and noise specifications assure compatibility to noise-susceptible circuits. For systems requiring controlled startup/shutdown, an external remote on/off control may use a switch, transistor or digital logic.

Self-protection design features prevent both converter and external circuit fails. These include input undervoltage lockout and overtemperature shutdown. The outputs current limit using the 'hiccup' autorestart technique and the outputs are short-circuit protected. Additional features include output overvoltage and reverse conduction elimination.

The UEI25 series' industry-standard pinout makes this part a direct replacement for larger 1" x 2" converters. Applications include small instruments, area-limited

microcontrollers, data communications equipment, remote sensor systems, telephone equipment, vehicle and portable electronics. It operates in the industrial temperature range of -40 to +85 degrees C.

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