



30 Watt DC/DC Converters

FEATURES

- COMMERCIAL, CLASS H and CLASS K SCREENING
- PIN FOR PIN COMPATABILITY
- 16 – 40 VOLT & 36 – 80 VOLT INPUT RANGES
- OUTPUT VOLTAGES TO INCLUDE: 3.3, 5, 12, 15, ± 5 , ± 12 , ± 15
- FULLY ISOLATED
- SHORT CIRCUIT PROTECTION
- INPUT UNDERVOLTAGE LOCKOUT
- OUTPUT OVERVOLTAGE LIMIT
- INHIBIT FUNCTION & OPTIONAL SYNC



DESCRIPTIONS

The MPT 30 Watt DC/DC converters will provide a new level of performance with-out the high price and long lead times of other class H or class K devices. Utilizing thick film hybrid technology, industry leading manufacturing techniques and DC/DC converter design expertise, MPT can provide a new source for DC/DC converters in the commercial, military, aerospace, and space markets.

In a 2.125" x 1.125" x 0.400", pin for pin compatible, hermetically sealed package, the MPT 30 Watt converters will offer industry standard performance up to 30 Watts at efficiencies up to 83% at the standard military temperature range of -55°C to 125°C for class H and K devices.

SINGLES ELECTRICAL CHARACTERISTICS (25°C T_c, 28 VDC V_{in}, 100% load):

| Parameter | 3.3 Vout | | | 5 Vout | | | 12 Vout | | | 15 Vout | | | Units |
|-----------------------|----------|-----|------|--------|-----|------|---------|-----|-------|---------|-----|-------|--------|
| | Min | Typ | Max | Min | Typ | Max | Min | Typ | Max | Min | Typ | Max | |
| Input Voltage | 16 | 28 | 40 | 16 | 28 | 40 | 16 | 28 | 40 | 16 | 28 | 40 | Volts |
| Input Ripple Current | - | - | 50 | - | - | 50 | - | - | 50 | - | - | 50 | mA p-p |
| Output Voltage | 3.27 | 3.3 | 3.33 | 4.95 | 5 | 5.05 | 11.88 | 12 | 12.12 | 14.85 | 15 | 15.15 | Volts |
| Output Current | - | - | 9000 | - | - | 6000 | - | - | 2500 | - | - | 2000 | mA |
| Output Power | - | - | 30 | - | - | 30 | - | - | 30 | - | - | 30 | Watts |
| Efficiency | - | - | 75 | - | - | 78 | - | - | 83 | - | - | 83 | % |
| Line Regulation | - | 10 | 30 | - | 10 | 50 | - | 10 | 50 | - | 10 | 50 | mV |
| Load Regulation | - | 10 | 30 | - | 10 | 50 | - | 10 | 50 | - | 10 | 50 | mV |
| Output Ripple Voltage | - | 65 | 150 | - | 100 | 300 | 300 | 500 | | 300 | 500 | | mV p-p |

DUALS ELECTRICAL CHARACTERISTICS (25°C Tc, 28 VDC Vin, 100% load):

| | ±5 Vout | | | ±12 Vout | | | ±15 Vout | | | |
|-----------------------|---------|-----|-------|----------|-----|-------|----------|-----|-------|--------|
| Parameter | Min | Typ | Max | Min | Typ | Max | Min | Typ | Max | Units |
| Input Voltage | 16 | 28 | 40 | 16 | 28 | 40 | 16 | 28 | 40 | Volts |
| Input Ripple Current | - | - | 50 | - | - | 50 | - | - | 50 | mA p-p |
| + Output Voltage | 4.95 | 5 | 5.05 | 11.88 | 12 | 12.12 | 14.85 | 15 | 15.15 | Volts |
| - Output Voltage | 4.95 | -5 | 5.05 | 11.88 | 12 | 12.12 | 14.85 | 15 | 15.15 | Volts |
| Output Current | - | - | ±3000 | - | - | ±1250 | - | - | ±1000 | mA |
| Output Power | - | - | 30 | - | - | 30 | - | - | 30 | Watts |
| Efficiency | - | - | 78 | - | - | 80 | - | - | 80 | % |
| Line Regulation | - | 10 | 50 | - | 10 | 50 | - | 10 | 50 | mV |
| Load Regulation | - | 10 | 50 | - | 10 | 50 | - | 10 | 50 | mV |
| Output Ripple Voltage | - | 100 | 300 | 300 | 500 | | - | 300 | 500 | mV p-p |

PINOUT:

| Pin no. | Single Output | Dual Output |
|---------|-----------------|-----------------|
| 1 | Positive Input | Positive Input |
| 2 | Inhibit | Inhibit |
| 3 | Sense Return | Positive Output |
| 4 | Output Common | Output Common |
| 5 | Positive Output | Negative Output |
| 6 | Positive Sense | Case Ground |
| 7 | Case Ground | Case Ground |
| 8 | Case Ground | Case Ground |
| 9 | Sync | Sync |
| 10 | Input Common | Input Common |

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