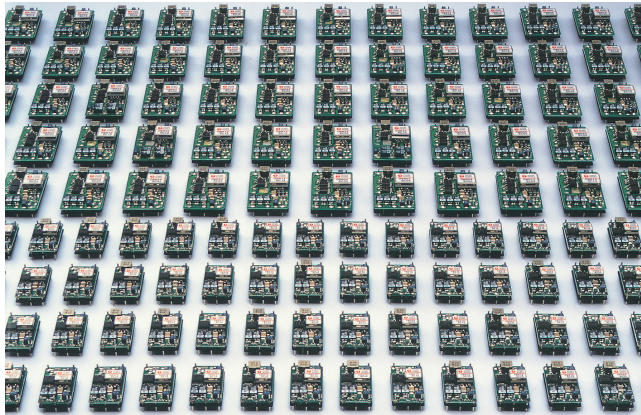


3 WATT DC-DC CONVERTER

OBQ-SC/OBQ-WC series



General Description

In response to market demand for “DISTRIBUTED POWER,” ETA has developed a new DC/DC converter suitable for PCB mounting. OB-Series AC/DC Switching Power Supplies are designed and built to be installed right onto the user’s printed circuit board like a piece of “patch-work”. They are small, light in weight and cost effective.

Features

1. PCB Mountable
2. Small , Light Weight
3. High Efficiency
4. Cost effective
5. Output Voltage adjustable
6. Over Voltage Protection

SC/WC05 Input Specifications

| Specifications | Model | | | | | | | |
|--|---------------|-----------|-----------|-----------|-----------|-----------|-----|-----|
| | OBQ05SC05 | OBQ12SC05 | OBQ15SC05 | OBQ24SC05 | OBQ22WC05 | OBQ23WC05 | | |
| OBQ**SC/WC05 3WATTS/SINGLE/2 OUTPUT | | | | | | | | |
| Input Characteristic | | | | | | | | |
| Input Voltage DC[V] | 5 | 5 | 5 | 5 | 5 | 12 | 5 | 12 |
| Input Range DC[V] | 4.5-6 | | | | | | | |
| Inrush Current [A] | Not specified | | | | | | | |
| Input Range | | | | | | | | |
| at no load [mA](typical) | 41 | 51 | 51 | 57 | 66 | 64 | 64 | 64 |
| at full load[mA](typical) | 676 | 789 | 779 | 800 | 843 | 356 | 800 | 342 |
| Line Back Noise [mVp-p](typical) | 200 | 100 | 200 | 200 | 200 | 100 | 200 | 100 |
| Efficiency [%] (typical) *1 | 74 | 76 | 77 | 78 | 74 | 73 | 75 | 73 |

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HIGH QUALITY SWITCHING POWER SUPPLIES

SC/WC05 Output Specifications

| Specifications | Model | | | | | | | |
|--|---|-----------|-----------|-----------|------------|-------|------------|-------|
| | OBQ05SC05 | OBQ12SC05 | OBQ15SC05 | OBQ24SC05 | OBQ22WC05 | | OBQ23WC05 | |
| OBQ**SC/WC05 3WATTS/SINGLE/2 OUTPUT | | | | | | | | |
| Output Voltage [V] | 5 | 12 | 15 | 24 | +12 | -12 | +15 | -15 |
| Output Current [A] | 0.5 | 0.25 | 0.20 | 0.13 | 0.013-0.13 | | 0.010-0.10 | |
| Voltage Tolerance +/-[mV](max) *2 | 100 | 240 | 300 | 480 | 240 | 240 | 300 | 300 |
| Ripple and Noise [mVp-p](max) *3 | 100 | | | | | | | |
| Regulation | | | | | | | | |
| a.Static Line Regulation [mV](max) | 25 | 60 | 75 | 120 | 60 | 60 | 75 | 75 |
| b.Dynamic Line Regulation +/-[mV](max) *4 | 250 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| c.Static Load Regulation [mV](max) *5 | 25 | 60 | 75 | 120 | ±1000 | ±1000 | ±1000 | ±1000 |
| [mV](max) *6 | | | | | ±480 | ±480 | ±600 | ±600 |
| [mV](max) *7 | | | | | ±60 | ±60 | ±75 | ±75 |
| d.Temperature Coefficient *8 | 0.03%/°C(maximum) | | | | | | | |
| e.Drift[mV](maximum) *9 | 40 | 75 | 90 | 135 | 75 | 75 | 90 | 90 |
| f.Dynamic Load Regulation +/- [mV](typ) *10 | 150 | 360 | 450 | 720 | 360 | 360 | 450 | 450 |
| g.Recovery Time *4, *10 | 20mS(typical) | | | | | | | |
| Rise up time | 10mS(typical) at rated input/output | | | | | | | |
| Hold up time | Not specified | | | | | | | |
| Functions | | | | | | | | |
| Overcurrent Protection *10 | Foldback/Current Limiting with automatic recovery at discontinuous short circuit conditions | | | | | | | |
| Overvoltage Protection | Not available | | | | | | | |
| Remote Sense | Not available | | | | | | | |
| Trimming of output voltage[mV] *11 | +250 | +250 | +350 | +650 | | | | |
| [mV] *12 | -250 | -900 | -1600 | -4000 | | | | |
| Input Fuse | Installed | | | | | | | |
| Environmental | | | | | | | | |
| Operating Temperature (derating) | -20 to +71°C | | | | | | | |
| Operating Humidity | 3.5%/°C (50oC to 71°C) (out of warranty >=71°C) | | | | | | | |
| Storage Temperature | 20-90%/RH(non-condensing) | | | | | | | |
| Storage Humidity | -20 to +85°C | | | | | | | |
| Withstanding Voltage | 20 to 90%/RH(non-condensing) | | | | | | | |
| Isolation Resistance | Primary-Secondary AC500V for 1minute | | | | | | | |
| Capacitance(input-output) [pF](typical) | Primary-Frame Ground 50MΩ(minimum) by DC500V insulation tester | | | | | | | |
| Vibration | 2200 | | | | | | | |
| Shock | 5-10Hz:10mm double amplitude,10-55Hz:19.6m/s ² ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating) | | | | | | | |
| Cooling | 294m/s ² | | | | | | | |
| Weight (typical) | Convection | | | | | | | |
| | open board type:6g | | | | | | | |

Conditions:

*1 at 25°C and rated input/output

*2 OBQ**WC0512 satisfies the above-mentioned specifications at the same load conditions on both outputs

*3 measured by a bayonet probe at the output connector at a 0 to 100MHz bandwidth

*4 when input voltage changed from 4.5V to 16V rapidly at rated output

*5 when output current changed from 0mA to rated current keeping the current of other output below minimum rated current at rated input

*6 when output current changed from minimum rated current to rated current keeping the current of other output above minimum rated current at rated input

*7 when output current of both outputs changed from 0mA to rated current identically at rated input

*8 at -20 to +71°C

*9 for 7hour period after 1hour warm-up at 25°C and rated input/output

*10 when output current changed rapidly between 25% and 75% of rated current at rated input

*11 to increase output voltage,put a resistor between pin"0" and trimming pin

*12 to reduce output voltage,put a resistor between pin"+" and trimming pin

SC/WC0512 Input Specifications

| Specifications | Model | | | | | | | | | | | |
|--|---------------|-----|-------------|-----|-------------|-----|-------------|-----|-------------|-----|-------------|-----|
| | OBQ05SC0512 | | OBQ12SC0512 | | OBQ15SC0512 | | OBQ24SC0512 | | OBQ22WC0512 | | OBQ23WC0512 | |
| OBQ**SC/WC0512 3WATTS/SINGLE/2 OUTPUT | | | | | | | | | | | | |
| Input Characteristic | | | | | | | | | | | | |
| Input Voltage DC[V] | 5 | 12 | 5 | 12 | 5 | 12 | 5 | 12 | 5 | 12 | 5 | 12 |
| Input Range DC[V] | 4.5-16V | | | | | | | | | | | |
| Inrush Current [A] | Not specified | | | | | | | | | | | |
| Inrush Current [A] | | | | | | | | | | | | |
| at no load [mA](typical) | 41 | 44 | 51 | 54 | 51 | 53 | 57 | 59 | 66 | 64 | 64 | 64 |
| at full load[mA](typical) | 676 | 297 | 789 | 342 | 779 | 337 | 800 | 346 | 843 | 356 | 800 | 342 |
| Line Back Noise [mVp-p](typical) | 200 | 100 | 100 | 80 | 200 | 100 | 200 | 100 | 200 | 100 | 200 | 100 |
| Efficiency [%] (typical) *1 | 74 | 70 | 76 | 73 | 77 | 74 | 78 | 75 | 74 | 73 | 75 | 73 |

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HIGH QUALITY SWITCHING POWER SUPPLIES

SC/WC0512 Output Specifications

| Specifications | Model | | | | | | | |
|--|--|-------------|-------------|-------------|-------------|-------------|------------|-------|
| | OBQ05SC0512 | OBQ12SC0512 | OBQ15SC0512 | OBQ24SC0512 | OBQ22WC0512 | OBQ23WC0512 | | |
| OBQ**SC/WC0512 3WATTS/SINGLE/2 OUTPUT | | | | | | | | |
| Output Voltage [V] | 5 | 12 | 15 | 24 | +12 | -12 | +15 | -15 |
| Output Current [A] | 0.5 | 0.25 | 0.20 | 0.13 | 0.013-0.13 | | 0.010-0.10 | |
| Voltage Tolerance +/-[mV](max) *2 | 100 | 240 | 300 | 480 | 240 | 240 | 300 | 300 |
| Ripple and Noise [mVp-p](max) *3 | 100 | | | | | | | |
| Regulation | | | | | | | | |
| a.Static Line Regulation [mV](max) | 25 | 60 | 75 | 120 | 60 | 60 | 75 | 75 |
| b.Dynamic Line Regulation +/-[mV](max) *4 | 250 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| c.Static Load Regulation [mV](max) *5 | 25 | 60 | 75 | 120 | ±1000 | ±1000 | ±1000 | ±1000 |
| [mV](max) *6 | | | | | ±480 | ±480 | ±600 | ±600 |
| [mV](max) *7 | | | | | ±60 | ±60 | ±75 | ±75 |
| d.Temperature Coefficient *8 | 0.03%/°C(maximum) | | | | | | | |
| e.Drift[mV](maximum) *9 | 40 | 75 | 90 | 135 | 75 | 75 | 90 | 90 |
| f.Dynamic Load Regulation +/- [mV](typ) *10 | 150 | 360 | 450 | 720 | 360 | 360 | 450 | 450 |
| g.Recovery Time *4, *10 | 20mS(typical) | | | | | | | |
| Rise up time | 10mS(typical) at rated input/output | | | | | | | |
| Hold up time | Not specified | | | | | | | |
| Functions | | | | | | | | |
| Overcurrent Protection *10 | Foldback/Current Limiting with automatic recovery at discontinuous short circuit conditions | | | | | | | |
| Overvoltage Protection | Not available | | | | | | | |
| Remote Sense | Not available | | | | | | | |
| Trimming of output voltage[mV] *11 | +250 | +250 | +350 | +650 | | | | |
| [mV] *12 | -250 | -900 | -1600 | -4000 | | | | |
| Input Fuse | Installed | | | | | | | |
| Environmental | | | | | | | | |
| Operating Temperature (derating) | -20 to +71°C | | | | | | | |
| Operating Humidity | 3.5%/°C (50oC to 71°C) (out of warranty >=71°C) | | | | | | | |
| Storage Temperature | 20-90%/RH(non-condensing) | | | | | | | |
| Storage Humidity | -20 to +85°C | | | | | | | |
| Withstanding Voltage | 20 to 90%/RH(non-condensing) | | | | | | | |
| Isolation Resistance | Primary-Secondary AC500V for 1minute | | | | | | | |
| Capacitance(input-output) [pF](typical) | Primary-Frame Ground 50MΩ(minimum) by DC500V insulation tester | | | | | | | |
| Vibration | 2200 | | | | | | | |
| Shock | 5-10Hz:10mm double amplitude.10-55Hz:19.6m/s ² 20minutes' period for 60minutes each along X.Y.Z axes(non-operating) | | | | | | | |
| Cooling | 294m/s ² | | | | | | | |
| Weight (typical) | Convection | | | | | | | |
| | open board type:6g | | | | | | | |

Conditions:

*1 at 25°C and rated input/output

*2 OBQ**WC0512 satisfies the above-mentioned specifications at the same load conditions on both outputs

*3 measured by a bayonet probe at the output connector at a 0 to 100MHz bandwidth

*4 when input voltage changed from 4.5V to 16V rapidly at rated output

*5 when output current changed from 0mA to rated current keeping the current of other output below minimum rated current at rated input

*6 when output current changed from minimum rated current to rated current keeping the current of other output above minimum rated current at rated input

*7 when output current of both outputs changed from 0mA to rated current identically at rated input

*8 at -20 to +71°C

*9 for 7hour period after 1hour warm-up at 25°C and rated input/output

*10 when output current changed rapidly between 25% and 75% of rated current at rated input

*11 to increase output voltage,put a resistor between pin"0" and trimming pin

*12 to reduce output voltage,put a resistor between pin"+" and trimming pin

SC12 Input Specifications

| Specifications | Model | | | |
|---|---------------|-----------|-----------|-----------|
| OBQ**SC12 3WATTS/SINGLE OUTPUT | OBQ05SC12 | OBQ12SC12 | OBQ15SC12 | OBQ24SC12 |
| Input Characteristic | | | | |
| Input Voltage DC[V] | 12 | 12 | 12 | 12 |
| Input Range DC[V] | 9-18V | | | |
| Inrush Current [A] | Not specified | | | |
| at no load [mA](typical) | 41 | 51 | 51 | 57 |
| at full load[mA](typical) | 676 | 789 | 779 | 800 |
| Line Back Noise [mVp-p](typical) | 200 | 100 | 200 | 200 |
| Efficiency [%] (typical) *1 | 74 | 77 | 77 | 78 |

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HIGH QUALITY SWITCHING POWER SUPPLIES

SC12 Output Specifications

| Specifications | Model | | | |
|---|---|-----------|-----------|-----------|
| | OBQ05SC12 | OBQ12SC12 | OBQ15SC12 | OBQ24SC12 |
| OBQ**SC12 3WATTS/SINGLE/2 OUTPUT | | | | |
| Output Voltage [V] | 5 | 12 | 15 | 24 |
| Output Current [A] | 0.5 | 0.25 | 0.20 | 0.13 |
| Voltage Tolerance +/-[mV](max) *2 | 100 | 240 | 300 | 480 |
| Ripple and Noise [mVp-p](max) *3 | 100 | | | |
| Regulation | | | | |
| a.Static Line Regulation [mV](max) | 25 | 60 | 75 | 120 |
| b.Dynamic Line Regulation +/-[mV](max) *4 | 250 | 200 | 200 | 200 |
| c.Static Load Regulation [mV](max) *5 | 25 | 60 | 75 | 120 |
| [mV](max) *6 | | | | |
| [mV](max) *7 | | | | |
| d.Temperature Coefficient *8 | 0.03%/°C(maximum) | | | |
| e.Drift[mV](maximum) *9 | 40 | 75 | 90 | 135 |
| f.Dynamic Load Regulation +/- [mV](typ) *10 | 150 | 360 | 450 | 720 |
| g.Recovery Time *4, *10 | 20mS(typical) | | | |
| Rise up time | 10mS(typical) at rated input/output | | | |
| Hold up time | Not specified | | | |
| Functions | | | | |
| Overcurrent Protection *10 | Foldback/Current Limiting with automatic recovery at discontinuous short circuit condi | | | |
| Overvoltage Protection | Not available | | | |
| Remote Sence | Not available | | | |
| Trimming of output voltage[mV] *11 | +250 | +250 | +350 | +650 |
| [mV] *12 | -250 | -900 | -1600 | -4000 |
| Input Fuse | Installed | | | |
| Environmental | | | | |
| Operating Temperature | -20 to +71°C | | | |
| (derating) | 3.5%/°C (50oC to 71°C) (out of warranty >=71°C) | | | |
| Operating Humidity | 20-90%/RH(non-condensing) | | | |
| Storage Temperature | -20 to +85°C | | | |
| Storage Humidity | 20 to 90%/RH(non-condensing) | | | |
| Withstanding Voltage | Primary-Secondary AC500V for 1minute | | | |
| Isolation Resistance | Primary-Frame Ground 50MΩ(minimum) by DC500V insulation tester | | | |
| Capacitance(input-output) [pF](typical) | 2200 | | | |
| Vibration | 5-10Hz:10mm double amplitude,10-55Hz:19.6m/s ² ,20minutes' period for 60minutes each along X,Y,Z axes(non-operat | | | |
| Shock | 294m/s ² | | | |
| Cooling | Convection | | | |
| Weight (typical) | open board type:6g | | | |

Conditions:

*1 at 25°C and rated input/output

*2 OBQ**WC0512 satisfies the above-mentioned specifications at the same load conditions on both outputs

*3 measured by a bayonet probe at the output connector at a 0 to 100MHz bandwidth

*4 when input voltage changed from 4.5V to 16V rapidly at rated output

*5 when output current changed from 0mA to rated current keeping the current of other output below minimum rated current at rated input

*6 when output current changed from minimum rated current to rated current keeping the current of other output above minimum rated current at rated input

*7 when output current of both outputs changed from 0mA to rated current identically at rated input

*8 at -20 to +71°C

*9 for 7hour period after 1hour warm-up at 25°C and rated input/output

*10 when output current changed rapidly between 25% and 75% of rated current at rated input

*11 to increase output voltage,put a resistor between pin"0" and trimming pin

*12 to reduce output voltage,put a resistor between pin"+" and trimming pin

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HIGH QUALITY SWITCHING POWER SUPPLIES

SC/WC1224 Input Specifications

| Specifications | Model | | | | | | | | | | | | |
|--|---------------|-------------|-------------|-------------|-------------|-------------|-----|-----|-------------------------|-----|------|-----|--|
| OBQ**SC/WC1224 3WATTS/SINGLE/2 OUTPUT | OBQ05SC1224 | OBQ12SC1224 | OBQ15SC1224 | OBQ24SC1224 | OBQ22WC1224 | OBQ23WC1224 | | | | | | | |
| Input Characteristic | | | | | | | | | | | | | |
| Input Voltage DC[V] | 12 | 24 | 12 | 24 | 12 | 24 | 12 | 24 | 12 | 24 | 12 | 24 | |
| Input Range DC[V] | 8-32 | | | | | | | | | | | | |
| Inrush Current [A] | Not specified | | | | | | | | 9A/DC12V,18A/DC24V 10uS | | | | |
| Inrush Current [A] | | | | | | | | | | | | | |
| at no load [mA](typical) | 22 | 24 | 28 | 29 | 28 | 29 | 30 | 30 | 35 | 31 | 32 | 29 | |
| at full load[mA](typical) | 267 | 144 | 312 | 168 | 304 | 164 | 317 | 171 | 329 | 173 | 308 | 164 | |
| Line Back Noise [mVp-p](typical) | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 1000 | 500 | 1000 | 500 | |
| Efficiency [%] (typical) *1 | 78 | 72 | 80 | 74 | 82 | 76 | 82 | 76 | 79 | 75 | 81 | 76 | |

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HIGH QUALITY SWITCHING POWER SUPPLIES

SC/WC1224 Output Specifications

| Specifications | Model | | | | | | | |
|--|---|-------------|-------------|-------------|-------------|-------|-------------|-------|
| | OBQ05SC1224 | OBQ12SC1224 | OBQ15SC1224 | OBQ24SC1224 | OBQ22WC1224 | | OBQ23WC1224 | |
| OBQ**SC/WC1224 3WATTS/SINGLE/2 OUTPUT | | | | | | | | |
| Output Voltage [V] | 5 | 12 | 15 | 24 | +12 | -12 | +15 | -15 |
| Output Current [A] | 0.5 | 0.25 | 0.20 | 0.13 | 0.013-0.13 | | 0.010-0.10 | |
| Voltage Tolerance +/-[mV](maximum) *2 | 100 | 240 | 300 | 480 | 240 | 240 | 300 | 300 |
| Ripple and Noise [mVp-p](maximum) *3 | 100 | | | | | | | |
| Regulation | | | | | | | | |
| a.Static Line Regulation [mV](maximum) | 25 | 60 | 75 | 120 | 60 | 60 | 75 | 75 |
| b.Dynamic Line Regulation +/-[mV](maximum) *4 | 200 | 200 | 200 | 200 | 300 | 300 | 300 | 300 |
| c.Static Load Regulation [mV](maximum) *5 | 25 | 60 | 75 | 120 | ±1000 | ±1000 | ±1200 | ±1200 |
| [mV](maximum) *6 | | | | | ±480 | ±480 | ±600 | ±600 |
| [mV](maximum) *7 | | | | | ±60 | ±60 | ±75 | ±75 |
| d.Temperature Coefficient *8 | 0.03%/°C(maximum) | | | | | | | |
| e.Drift[mV](maximum) *9 | 40 | 75 | 90 | 135 | 75 | 75 | 90 | 90 |
| f.Dynamic Load Regulation [mV](maximum) *10 | 150 | 360 | 250 | 500 | 300 | 300 | 300 | 300 |
| g.Recovery Time *4, *10 | 20mS(typical) | | | | | | | |
| Rise up time | 10mS(typical) at rated input/output | | | | | | | |
| Hold up time | Not specified | | | | | | | |
| Functions | | | | | | | | |
| Overcurrent Protection | Foldback/Current Limiting with automatic recovery at discontinuous short circuit conditions | | | | | | | |
| Overvoltage Protection | Not available | | | | | | | |
| Remote Sense | Not available | | | | | | | |
| Trimming of output voltage[mV] (typical) *11 | +250 | +250 | +350 | +650 | | | | |
| [mV](typical) *12 | -250 | -900 | -1600 | -4000 | | | | |
| Input Fuse | Installed | | | | | | | |
| Environmental | | | | | | | | |
| Operating Temperature | -20 to 71°C | | | | | | | |
| (derating) *13 | 3.5%/(50°C to 71°C) (out of warranty ≥71°C) | | | | | | | |
| Operating Humidity | 20-90%/RH(non-condensing) | | | | | | | |
| Storage Temperature | -20 to +85°C | | | | | | | |
| Storage Humidity | 20 to 90%/RH(non-condensing) | | | | | | | |
| Withstanding Voltage | Primary-Secondary AC500V for 1minute | | | | | | | |
| Isolation Resistance | Primary-Secondary 50MΩ(minimum) by DC500V insulation tester | | | | | | | |
| Capacitance(input-output) [pF](typical) | 2200 | | | | | | | |
| Vibration | 5-10Hz:10mm double amplitude,10-55Hz:19.6m/s ² ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating) | | | | | | | |
| Shock | 294m/s ² | | | | | | | |
| Cooling | Convection | | | | | | | |
| Weight (typical) | open board type:6g | | | | | | | |

Conditions:

*1 at 25°C and rated input/output

*2 OBQ**WC0512 satisfies the above-mentioned specifications at the same load conditions on both outputs

*3 measured by a bayonet probe at the output connector at a 0 to 100Mhz bandwidth

*4 when input voltage changed from 8V to 32V rapidly at rated output

*5 when output current changed from 0mA to rated current keeping the current of other output below minimum rated current at rated input

*6 when output current changed from minimum rated current to rated current keeping the current of other output above minimum rated current at rated input

*7 when output current of both outputs changed from 0mA to rated current identically at rated input

*8 at -20 to +71°C

*9 for 7hour period after 1hour warm-up at 25°C and rated input/output

*10 when output current changed rapidly between 25% and 75% of rated current at rated input

*11 to increase output voltage,put a resistor between pin"0" and trimming pin

*12 to reduce output voltage,put a resistor between pin"+" and trimming pin

*13 operating temperature of OBQ**WC1224 should be ≤71-2*(Ein-24) at input voltage from 24V to 32V (Ein=Input Voltage)

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HIGH QUALITY SWITCHING POWER SUPPLIES

SC/WC2448 Input Specifications

| Specifications | Model | | | | | | | | | | | | |
|--|---------------|-------------|-------------|-------------|-------------|-------------|-----|------|-----|-----|-----|-----|----|
| OBQ**SC/WC2448 3WATTS/SINGLE/2 OUTPUT | OBQ05SC2448 | OBQ12SC2448 | OBQ15SC2448 | OBQ24SC2448 | OBQ22WC2448 | OBQ23WC2448 | | | | | | | |
| Input Characteristic | | | | | | | | | | | | | |
| Input Voltage DC[V] | 24 | 48 | 24 | 48 | 24 | 48 | 24 | 48 | 24 | 48 | 24 | 48 | |
| Input Range DC[V] | 18-72V | | | | | | | | | | | | |
| Inrush Current [A] | Not specified | | | | | | | | | | | | |
| Inrush Current [A] | | | | | | | | | | | | | |
| at no load [mA](typical) | 10 | 11 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 14 | 14 | 14 | 14 |
| at full load[mA](typical) | 136 | 72 | 154 | 82 | 152 | 81 | 158 | 84.4 | 160 | 86 | 152 | 75 | |
| Line Back Noise [mVp-p](typical) | 100 | 80 | 100 | 80 | 100 | 80 | 100 | 80 | 200 | 100 | 200 | 100 | |
| Efficiency [%] (typical) *1 | 76 | 72 | 81 | 76 | 82 | 77 | 82 | 77 | 81 | 76 | 82 | 76 | |

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HIGH QUALITY SWITCHING POWER SUPPLIES

SC/WC2448 Output Specifications

| Specifications | Model | | | | | | | |
|---|---|-------------|-------------|-------------|-------------|-------|-------------|-------|
| | OBQ**SC/WC2448 3WATTS/SINGLE/2 OUTPUT | | | | | | | |
| | OBQ05SC2448 | OBQ12SC2448 | OBQ15SC2448 | OBQ24SC2448 | OBQ22WC2448 | | OBQ23WC2448 | |
| Output Voltage [V] | 5 | 12 | 15 | 24 | +12 | -12 | +15 | -15 |
| Output Current [A] | 0.5 | 0.25 | 0.20 | 0.13 | 0.013-0.13 | | 0.010-0.10 | |
| Voltage Tolerance +/-[mV](maximum) *2 | 100 | 240 | 300 | 480 | 240 | 240 | 300 | 300 |
| Ripple and Noise [mVp-p](maximum) *3 | 100 | | | | | | | |
| Regulation | | | | | | | | |
| a.Static Line Regulation [mV](maximum) | 25 | 60 | 75 | 120 | 60 | 60 | 75 | 75 |
| b.Dynamic Line Regulation +/-[mV](maximum) *4 | 250 | 200 | 200 | 200 | 300 | 300 | 300 | 300 |
| c.Static Load Regulation [mV](maximum) *5 | 25 | 60 | 75 | 120 | ±1000 | ±1000 | ±1200 | ±1200 |
| [mV](maximum) *6 | | | | | ±480 | ±480 | ±600 | ±600 |
| [mV](maximum) *7 | | | | | ±60 | ±60 | ±75 | ±75 |
| d.Temperature Coefficient *8 | 0.03%/°C(maximum) | | | | | | | |
| e.Drift[mV](maximum) *9 | 40 | 75 | 90 | 135 | 75 | 75 | 90 | 90 |
| f.Dynamic Load Regulation [mV](maximum) *10 | 250 | 250 | 250 | 500 | 300 | 300 | 400 | 400 |
| g.Recovery Time *4, *10 | 20mS(typical) | | | | | | | |
| Rise up time | 10mS(typical) at rated input/output | | | | | | | |
| Hold up time | Not specified | | | | | | | |
| Functions | | | | | | | | |
| Overcurrent Protection | Foldback/Current Limiting w ith automatic recovery at discontinuous short circuit conditions | | | | | | | |
| Overvoltage Protection | Not available | | | | | | | |
| Remote Sence | Not available | | | | | | | |
| Trimming of output voltage[mV] *11 | +250 | +250 | +350 | +650 | | | | |
| [mV] *12 | -250 | -900 | -1600 | -4000 | | | | |
| Input Fuse | Installed | | | | | | | |
| Environmental | | | | | | | | |
| Operating Temperature (derating) *13 | -20 to +71°C | | | | | | | |
| Operating Humidity | 3.5%/°C (50°C to 71°C) (out of w arranty ≥ 71°C) | | | | | | | |
| Storage Temperature | 20-90%/RH(non-condensing) | | | | | | | |
| Storage Humidity | -20 to +85°C | | | | | | | |
| Withstanding Voltage | 20 to 90%/RH(non-condensing) | | | | | | | |
| Isolation Resistance | Primary-Secondary AC500V for 1minute | | | | | | | |
| Capacitance(input-output) [pF](typical) | Primary-Secondary 50MΩ(minimum) by DC500V insulation tester | | | | | | | |
| Vibration | 2200 | | | | | | | |
| Shock | 5-10Hz:10mm double amplitude,10-55Hz:19.6m/s ² ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating) | | | | | | | |
| Cooling | 294m/s ² | | | | | | | |
| Weight (typical) | Convection | | | | | | | |
| | open board type:6g | | | | | | | |

*1 at 25°C and rated input/output

*2 OBQ**WC2448 satisfies the above-mentioned specifications at the same load conditions on both outputs

*3 measured by a probe at the output connector at a 0 to 100MHz bandwidth

*4 when input voltage changed from 18V to 72V rapidly at rated output

*5 when output current changed from 0mA to rated current keeping the current of other output below minimum rated current at rated input

*6 when output current changed from minimum rated current to rated current keeping the current of other output above minimum rated current at rated input

*7 output current of both outputs changed from 0mA to rated current identically at rated input

*8 at -20 to +71°C

*9 for 7hour period after 1 hour warm-up at 25°C and rated input/output

*10 when output current changed rapidly between 25% and 75% of rated current at rated input

*11 to increase output voltage,put a resistor between pin"0" and trimming pin

*12 to reduce output voltage,put a resistor between pin"+" and trimming pin

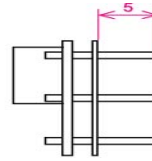
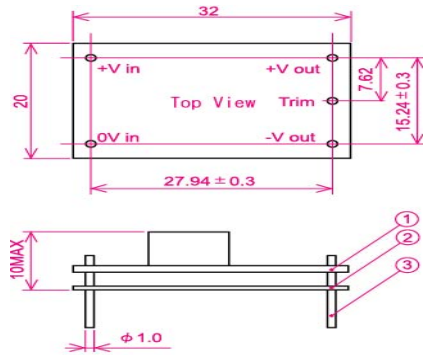
*13 out of warranty ≥ 50°C at input voltage from 63V to 72V



ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

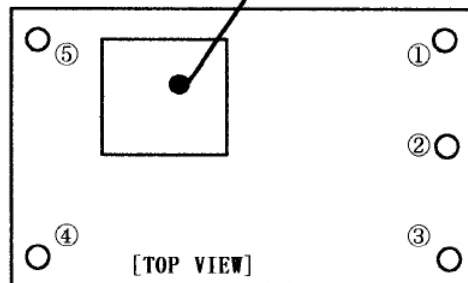
DIMENSION DIAGRAM



- ① Double-sided PCB FR4t=1.0
 - ② t=0.5 Insulator V0
 - ③ 1.0DIA PIN Material:BsB 2700 1/2H
Copper Plating 1~3μm
Solder Plating 3~6μm
- * Tolerance ±0.5

Dimension Diagram OBQ-SC2448

■ OBQ-SC/WC



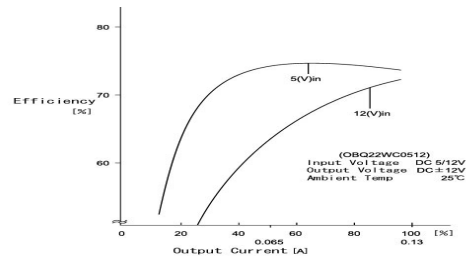
- ① : + [V]
- ② : COM
- ③ : 0 [V]
- ④ : DC 0 [V]
- ⑤ : DC + [V]



ETA-USA

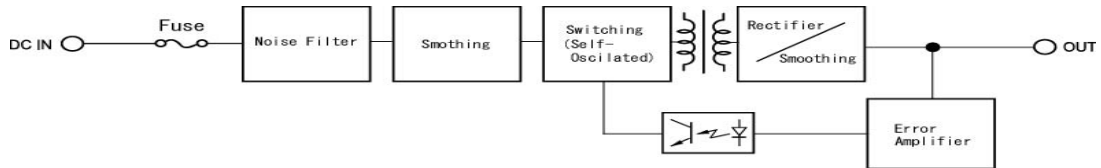
HIGH QUALITY SWITCHING POWER SUPPLIES

EFFICIENCY CURVE



Efficiency Curve OBQ22WC0512

BLOCK DIAGRAM



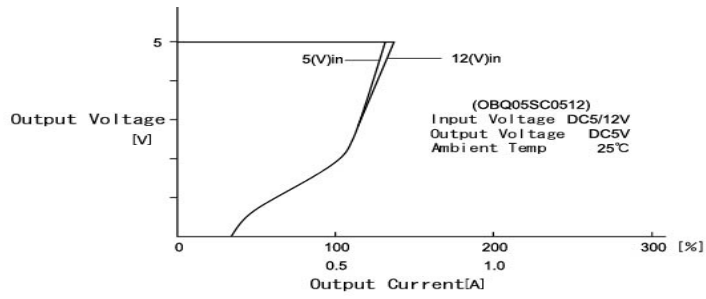
Block diagram OBQ-SC



ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

OCP CURVE



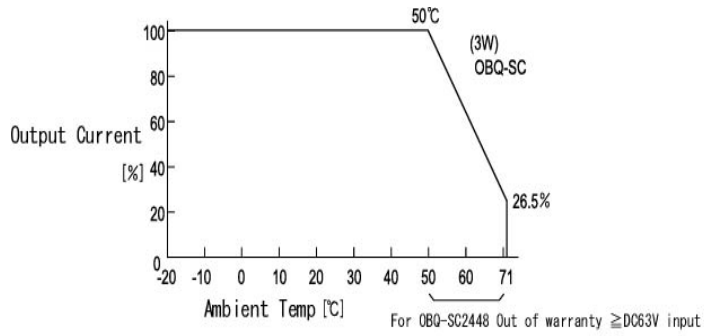
OCP Curve OBQ05SC0512



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HIGH QUALITY SWITCHING POWER SUPPLIES

DERATING CURVE



Derating Curve OBQ-SC-3W

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».



JONHON

«**JONHON**» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«**FORSTAR**» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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