

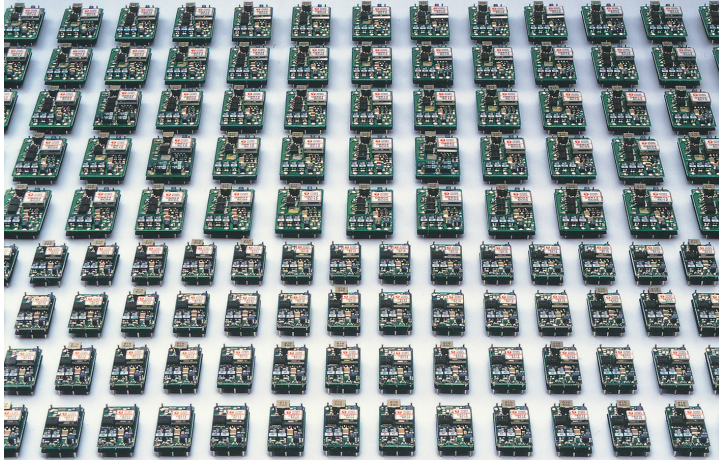


ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

6 WATT DC-DC CONVERTER

**OBR- SC / WC 05
SINGLE/ DUAL CHANNEL**

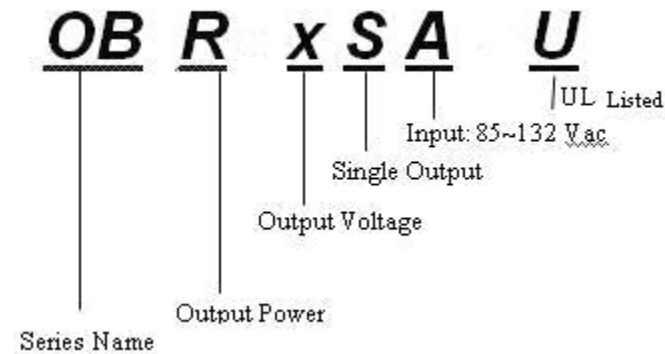


Features

1. PCB Mountable
2. Small , Light Weight
3. High Efficiency
4. Cost effective
5. Output Voltage adjustable
6. Over Voltage Protection
7. EMI: complies to FCC/B
8. Safety: UL 1950, CSA 950(C-UL) approved

General Description

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.



SC/WC05 Input Specifications

| Specifications | Model | | | | | | | | | | | |
|--|---------------|-----------|-----------|-----------|-----------|-----------|------|-----|------|-----|------|-----|
| OBR**SC/WC05 6WATTS/SINGLE/2 OUTPUT | OBR05SC05 | OBR12SC05 | OBR15SC05 | OBR24SC05 | OBR22WC05 | OBR23WC05 | | | | | | |
| Input Characteristic | | | | | | | | | | | | |
| Input Voltage DC[V] | 5 | 5 | 5 | 5 | 5 | 5 | | | | | | |
| Input Range DC[V] | 4.5-6 | | | | | | | | | | | |
| Inrush Current [A] | Not specified | | | | | | | | | | | |
| Input Range | | | | | | | | | | | | |
| at no load [mA](typical) | 50 | 51 | 68 | 60 | 75 | 62 | 88 | 67 | 106 | 93 | 116 | 98 |
| at full load[mA](typical) | 1351 | 578 | 1600 | 676 | 1548 | 654 | 1590 | 668 | 1642 | 697 | 1568 | 662 |
| Line Back Noise [mVp-p](typical) | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 |
| Efficiency [%] (typical) *1 | 74 | | 74 | | 75 | | 76 | | 74 | | 75 | |

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SC/WC05 Output Specifications

| Specifications | Model | | | | | | | |
|--|--|-----------|-----------|-----------|------------|-------|------------|-------|
| | OBR05SC05 | OBR12SC05 | OBR15SC05 | OBR24SC05 | OBR22WC05 | | OBR23WC05 | |
| OBR**SC/WC05 6WATTS/SINGLE/2 OUTPUT | | | | | | | | |
| Output Voltage [V] | 5 | 12 | 15 | 24 | +12 | -12 | +15 | -15 |
| Output Current [A] | 1 | 0.50 | 0.40 | 0.26 | 0.025-0.25 | | 0.020-0.20 | |
| 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 | 360 | 450 | 720 | 480 | 480 | 600 | 600 |
| 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 | 450 | 720 | 360 | 360 | 450 | 450 |
| g.Recovery Time *4,*10 | 20mS(typical) | | | | | | | |
| Rise up time | 20mS(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] *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 (50°Cto 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:2G,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:12g | | | | | | | |

Conditions:

*1 at 25°C and rated input/output

*2 OBR**WC0512 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 4.5V to 16V rapidly at rated input

*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 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 reduce output voltage,put a resistor between pin"0" and trimming pin

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

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SC/WC0512 Input Specifications

| Specifications | Model | | | | | | | | | | | |
|--|---------------|-------------|-------------|-------------|-------------|-------------|------|-----|------|-----|------|-----|
| OBR**SC/WC0512 6WATTS/SINGLE/2 OUTPUT | OBR05SC0512 | OBR12SC0512 | OBR15SC0512 | OBR24SC0512 | OBR22WC0512 | OBR23WC0512 | | | | | | |
| Input Characteristic | | | | | | | | | | | | |
| Input Voltage DC[V] | 5 | 12 | 5 | 12 | 5 | 12 | 5 | 12 | 5 | 12 | 5 | 12 |
| Input Range DC[V] | 4.5-16 | | | | | | | | | | | |
| Inrush Current [A] | Not specified | | | | | | | | | | | |
| Inrush Current [A] | | | | | | | | | | | | |
| at no load [mA](typical) | 50 | 51 | 68 | 60 | 75 | 62 | 88 | 67 | 106 | 93 | 116 | 98 |
| at full load[mA](typical) | 1351 | 578 | 1600 | 676 | 1548 | 654 | 1590 | 668 | 1642 | 697 | 1568 | 662 |
| Line Back Noise [mVp-p](typical) | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 |
| Efficiency [%] (typical) *1 | 74 | 72 | 75 | 74 | 77 | 76 | 78 | 78 | 75 | 74 | 76 | 75 |

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HIGH QUALITY SWITCHING POWER SUPPLIES

OC/WC0512 Output Specifications

| Specifications | Model | | | | | | | |
|--|--|-------------|-------------|-------------|-------------|-------|-------------|-------|
| | OBR05SC0512 | OBR12SC0512 | OBR15SC0512 | OBR24SC0512 | OBR22WC0512 | | OBR23WC0512 | |
| OBR**SC/WC0512 6WATTS/SINGLE/2 OUTPUT | | | | | | | | |
| Output Voltage [V] | 5 | 12 | 15 | 24 | +12 | -12 | +15 | -15 |
| Output Current [A] | 1 | 0.50 | 0.40 | 0.26 | 0.025-0.25 | | 0.020-0.20 | |
| 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 | 360 | 450 | 720 | 480 | 480 | 600 | 600 |
| 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 | 450 | 720 | 360 | 360 | 450 | 450 |
| g.Recovery Time *4,*10 | 20mS(typical) | | | | | | | |
| Rise up time | 20mS(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] *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(50°C to 71°C)(out of warranty ≥1°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:2G,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:12g | | | | | | | |

Conditions:

*1 at 25°Cand rated input/output

*2 OBR**WC0512 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 4.5V to 16V rapidly at rated input

*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 1hour warm-up at 25°Cand rated input/output

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

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

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

SC/WC12 Input Specifications

| Specifications | Model | | | | | | | | | | | |
|--|---------------|-----------|-----------|-----------|-----------|-----------|------|-----|------|-----|------|-----|
| OBR**SC/WC12 6WATTS/SINGLE/2 OUTPUT | OBR05SC12 | OBR12SC12 | OBR15SC12 | OBR24SC12 | OBR22WC12 | OBR23WC12 | | | | | | |
| Input Characteristic | | | | | | | | | | | | |
| Input Voltage DC[V] | 5 | 12 | 15 | 24 | 5 | 12 | 5 | 12 | | | | |
| Input Range DC[V] | 9-18V | | | | | | | | | | | |
| Inrush Current [A] | Not specified | | | | | | | | | | | |
| Input Range | | | | | | | | | | | | |
| at no load [mA](typical) | 50 | 51 | 68 | 60 | 75 | 62 | 88 | 67 | 106 | 93 | 116 | 98 |
| at full load[mA](typical) | 1351 | 578 | 1600 | 676 | 1548 | 654 | 1590 | 668 | 1642 | 697 | 1568 | 662 |
| Line Back Noise [mVp-p](typical) | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 |
| Efficiency [%] (typical) *1 | 75 | 78 | 79 | 81 | 78 | 79 | | | | | | |

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SC/WC12 Output Specifications

| Specifications | Model | | | | | | | |
|--|--|-----------|-----------|-----------|------------|-----------|------------|-------|
| | OBR05SC12 | OBR12SC12 | OBR15SC12 | OBR24SC12 | OBR22WC12 | OBR23WC12 | | |
| OBR**SC/WC12 6WATTS/SINGLE/2 OUTPUT | | | | | | | | |
| Output Voltage [V] | 5 | 12 | 15 | 24 | +12 | -12 | +15 | -15 |
| Output Current [A] | 1 | 0.50 | 0.40 | 0.26 | 0.025-0.25 | | 0.020-0.20 | |
| 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 | 360 | 450 | 720 | 480 | 480 | 600 | 600 |
| 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 | 450 | 720 | 360 | 360 | 450 | 450 |
| g.Recovery Time *4,*10 | 20mS(typical) | | | | | | | |
| Rise up time | 20mS(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 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 (50°Cto 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:2G,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:12g | | | | | | | |

Conditions:

*1 at 25°C and rated input/output

*2 OBR**WC0512 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 4.5V to 16V rapidly at rated input

*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 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 reduce output voltage,put a resistor between pin"0" and trimming pin

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

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SC/WC1224 Input Specifications

| Specifications | Model | | | | | | | | | | | |
|--|---------------|-------------|-------------|-------------|-------------|-------------|-----|-----|-----|-----|-----|-----|
| OBR**SC/WC1224 6WATTS/SINGLE/2 OUTPUT | OBR05SC1224 | OBR12SC1224 | OBR15SC1224 | OBR24SC1224 | OBR22WC1224 | OBR23WC1224 | | | | | | |
| 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 | | | | | | | | | | | |
| Input Range | | | | | | | | | | | | |
| at no load [mA](typical) | 26 | 30 | 28 | 33 | 28 | 35 | 33 | 34 | 38 | 38 | 38 | 38 |
| at full load[mA](typical) | 520 | 270 | 602 | 312 | 595 | 308 | 611 | 313 | 617 | 312 | 609 | 308 |
| Line Back Noise [mVp-p](typical) | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 |
| Efficiency [%] (typical) *1 | 80 | 77 | 83 | 80 | 84 | 81 | 85 | 83 | 81 | 80 | 82 | 81 |

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HIGH QUALITY SWITCHING POWER SUPPLIES

SC/WC1224 Output Specification

| OBR**SC/WC1224 6WATTS/SINGLE/2 OUTPUT | OBR05SC1224 | OBR12SC1224 | OBR15SC1224 | OBR24SC1224 | OBR22WC1224 | OBR23WC1224 | OBR23WC1224 |
|---|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Output Voltage [V] | 5 | 12 | 15 | 24 | +12 | -12 | +15 -15 |
| Output Current [A] | 1 | 0.50 | 0.40 | 0.26 | 0.025-0.25 | | 0.020-0.20 |
| 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 | 200 | 200 | 200 200 |
| c.Static Load Regulation [mV](maximum) *5 | 25 | 60 | 75 | 120 | ±1000 | ±1000 | ±1000 ±1000 |
| [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](typical) *10 | 150 | 360 | 450 | 720 | 360 | 360 | 450 450 |
| g.Recovery Time *4, *10 | 20mS(typical) | | | | | | |
| Rise up time | 20mS(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 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) *13 | 3.5%/°C(50°C to 71°C) (out of warranty >=71°C) | | | | | | |
| Operating Humidity | 2-90%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 50MW(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:12g | | | | | | |

Conditions:

*1 at 25°C and rated input/output

*2 OBR**WC1224 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 8V to 32V rapidly at rated input

*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 1hour warm-up at 25°C and rated input/output

*10 when output current changed from 25% of rated current to 75% rapidly at rated input

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

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

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HIGH QUALITY SWITCHING POWER SUPPLIES

SC/WC2448 Input Specification

| Specifications | Model | | | | | | | | | | | |
|-----------------------------------|--|-----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | OBR**SC/WC2448 6WATTS/SINGLE/2 OUTPUT | | OBR05SC2448 | OBR12SC2448 | OBR15SC2448 | OBR24SC2448 | OBR22WC2448 | OBR23WC2448 | OBR24WC2448 | OBR25WC2448 | OBR26WC2448 | OBR27WC2448 |
| Input Characteristic | | | | | | | | | | | | |
| Input Voltage DC[V] | 24 | 48 | 24 | 48 | 24 | 48 | 24 | 48 | 24 | 48 | 24 | 48 |
| Input Range DC[V] | 18-72 | | | | | | | | | | | |
| Inrush Current [A] | Not specified | | | | | | | | | | | |
| Inrush Current [A] | | | | | | | | | | | | |
| at no load [mA](typical) | 11 | 13 | 12 | 14 | 12 | 14 | 14 | 16 | 18 | 18 | 18 | 18 |
| at full load[mA](typical) | 267 | 137 | 305 | 154 | 297 | 153 | 306 | 155 | 308 | 156 | 304 | 154 |
| Line Back Noise [mVp-p] (typical) | 350 | 200 | 500 | 200 | 500 | 200 | 500 | 200 | 500 | 200 | 500 | 200 |
| Efficiency [%] (typical) *1 | 78 | 76 | 82 | 81 | 84 | 82 | 85 | 84 | 81 | 80 | 82 | 81 |

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HIGH QUALITY SWITCHING POWER SUPPLIES

SC/WC2448 Output Specification

| Specifications | Model | | | | | | | |
|--|---|-------------|-------------|-------------|-------------|-------|-------------|-------|
| | OBR05SC2448 | OBR12SC2448 | OBR15SC2448 | OBR24SC2448 | OBR22WC2448 | | OBR23WC2448 | |
| OBR**SC/WC2448 6WATTS/SINGLE/2 OUTPUT | | | | | | | | |
| Output Voltage [V] | 5 | 12 | 15 | 24 | +12 | -12 | +15 | -15 |
| Output Current [A] | 1 | 0.50 | 0.40 | 0.26 | 0.025-0.25 | | 0.020-0.20 | |
| 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 | 200 | 200 | 200 | 200 |
| c.Static Load Regulation [mV](maximum) *5 | 25 | 60 | 75 | 120 | ±1500 | ±1500 | ±2000 | ±2000 |
| [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 | 200 | 200 | 500 | 300 | 300 | 300 | 300 |
| g.Recovery Time *10 | 10mS(typical) | | | | | | | |
| Rise up time | 15mS(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] *11 | +250 | +250 | +350 | +650 | | | | |
| [mV] *12 | -250 | -900 | -1600 | -4000 | | | | |
| Input Fuse | Installed | | | | | | | |
| Environmental | | | | | | | | |
| Operating Temperature | -20 to 71°C | | | | | | | |
| (derating) *13 | 3.5%/°C(50°Cto 71°C) (out of warranty ≥1°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:12g | | | | | | | |

Conditions:

*1 at 25°Cand rated input/output

*2 OBR**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 input

*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 1hour warm-up at 25°Cand rated input/output

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

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

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

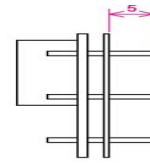
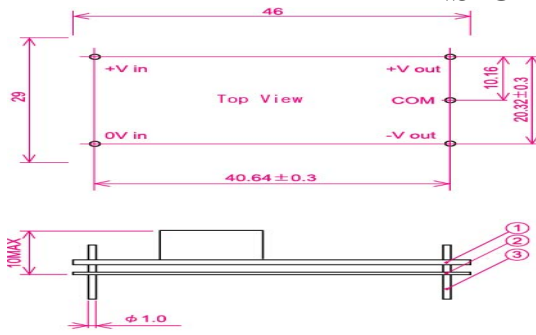
*13 out of warranty ≥50°Cat input voltage from 63V to 72V



ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

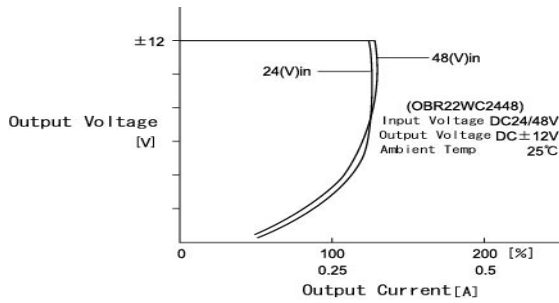
DIMENSION DIAGRAM



- 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

OCP CURVE

Dimension Diagram OBR-WC2448



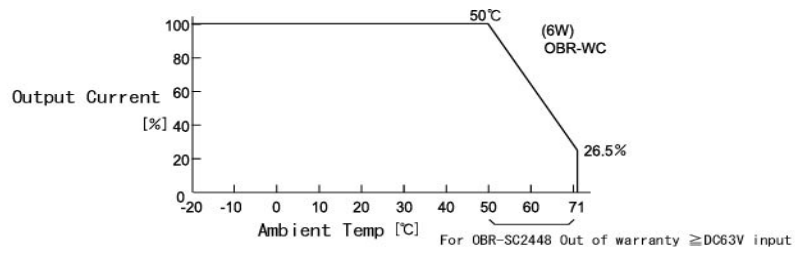
OCP Curve OBR22WC2448



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HIGH QUALITY SWITCHING POWER SUPPLIES

DERATING CURVE



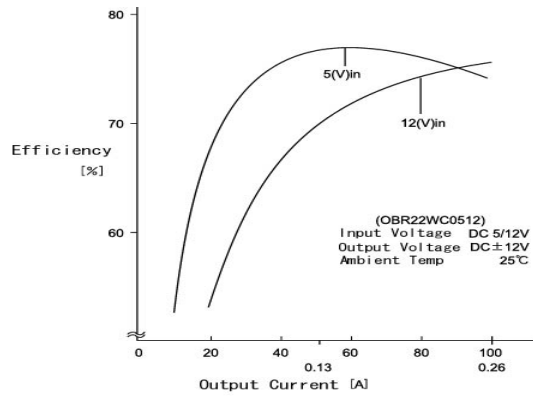
Derating Curve OBR-SC-6W



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EFFICIENCY CURVE



Efficiency Curve OBR22WC0512