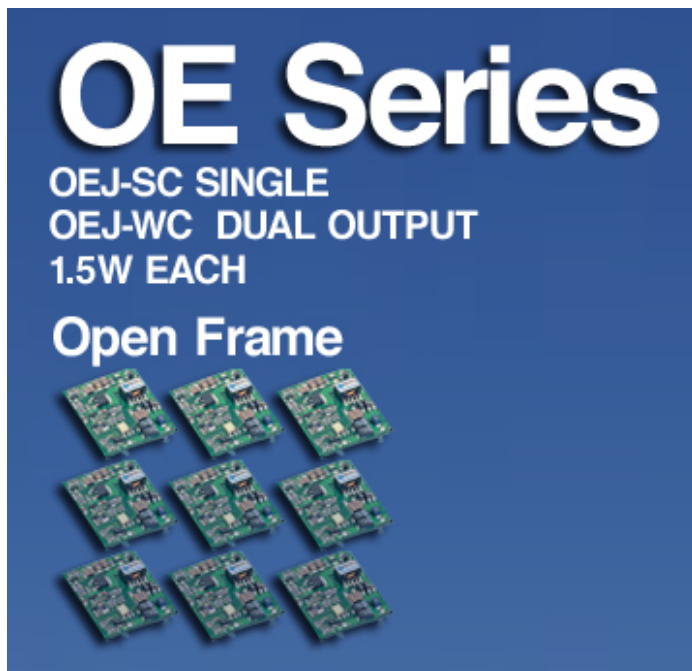




ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

OEJ- SC / WC series



The specification sheets below are for
OEJ-SC/WC0512, OEJ-SC/WC1224 , and
OEJ-SC/WC2448 series.

1.5 WATT DC-DC CONVERTER

SINGLE/ DUAL CHANNEL

Features

- 1. Compatibility type of PIN in the power supply unit market**
- 2. Realized wide range input(Ultra wide input)**

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HIGH QUALITY SWITCHING POWER SUPPLIES

Specifications OEJ**SC/WC0512 1.5WATTS/SINGLE/2 OUTPUT	Model											
	OEJ05SC0512		OEJ12SC0512		OEJ15SC0512		OEJ24SC0512		OEJ22WC0512		OEJ23WC0512	
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											
Input Current [A]	Not specified											
Input Range												
at no load [mA](typical)	18	19	21	21	23	23	26	28	27	28	29	32
at full load [mA](typical)	416	171	427	176	411	166	405	168	439	178	410	171
Line Back Noise [mVp-p](typical)	200	100	200	100	200	100	200	100	200	100	200	100
Efficiency [%] (typical) *1	72	73	73	74	73	75	77	77	71	73	73	73
Output Voltage [V]	5		12		15		24		12	-12	15	-15
Output Current [A]	0.3		0.13		0.1		0.065		0.065		0.05	
Voltage Tolerance +/-[mV](maximum)	150		360		450		720		360		450	
Ripple and Noise [mVp-p](maximum)	100											
Regulation												
a.Static Line Regulation [mV](maximum)	25		60		75		120		60	60	75	75
b.Dynamic Line Regulation +/-[mV](maximum)	250		250		250		300		250	250	250	250
c.Static Load Regulation +/-[mV](maximum)	25		60		75		120		60	60	75	75
+/-[mV](maximum) *6									600	600	750	750
d.Temperature Coefficient *7	0.03%/oC(maximum)											
e.Drift[mV](maximum) *8	45		75		90		135		75	75	90	90
f.Dynamic Load Regulation +/-[mV](maximum)	250		350		450		600		600	600	750	750
g.Recovery Time *4,*9	20mS(maximum)											
Rise up time	10mS(maximum) at rated input/output											
Hold up time	Not specified											
Functions												
Overcurrent Protection	Current Limiting with automatic recovery at discontinuous short circuit conditions											
>=110% of Rated Output Current [A]	0.33		0.143		0.11		0.0715		0.0715	0.0715	0.055	0.055
Overvoltage Protection	Not available											
Remote Sence	Not available											
Trimming of output voltage[mV]	Not available											
Input Fuse	Installed[2A]											
Environmental												
Operating Temperature (derating)	-20 to 71oC 3.5%/oC (50oC to 71oC) (out of warranty>=50oC at input above63V)											
Operating Humidity	20-90%/RH(non-condensing)											
Storage Temperature	-20 to +85oC											
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: 2G, 20minutes' period for 60minutes each along X,Y,Z axes(non-operating)											
Shock	30G											
Cooling	Convection											
Weight (typical)	open board type:5g											

*1 at 25°C and rated input/output

*2 OEJ**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 output

*5 when output current changed from 0mA to rated current at rated input

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

*6 when output current changed from minimum rated current to rated current keeping the current of both outputs within rated current at rated input

*7 at -20 to +71°C

*8 for 7hours from 1hour after switch-on at 25°C and rated input/output

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

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HIGH QUALITY SWITCHING POWER SUPPLIES

Specifications OEJ**SC/WC1224 1.5WATTS/SINGLE/2 OUTPUT	Model											
	OEJ05SC1224		OEJ12SC1224		OEJ15SC1224		OEJ24SC1224		OEJ22WC1224		OEJ23WC1224	
Input Characteristic												
Input Voltage DC[V]	12	24	12	24	12	24	12	24	12	24	12	24
Input Range DC[V]	8.0-32											
Input Current [A]	Not specified											
Input Range												
at no load [mA](typical)	9	12	11	13	12	15	13	16	14	17	16	19
at full load[mA](typical)	160	85	164	88	154	83	157	84	160	90	158	86
Line Back Noise [mVp-p](typical)	250	250	250	250	250	250	250	250	250	250	250	250
Efficiency [%] (typical) *1	78	73	79	74	81	75	83	77	77	72	79	73
Output Voltage [V]	5	12	15	24	+12	-12	+15	-15				
Output Current [A]	0.3	0.13	0.10	0.065	0.065	0.050						
Voltage Tolerance +/-[mV](maximum) *2	150	360	450	720	360	450						
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	250	250	300	250	250	250	250				
c.Static Load Regulation +/-[mV](maximum) *5	25	60	75	120	60	60	75	75				
+/-[mV](maximum) *6									±600	±600	±750	±750
d.Temperature Coefficient *7	0.03%/°C(maximum)											
e.Drift[mV](maximum) *8	45	75	90	135	75	75	90	90				
f.Dynamic Load Regulation +/-[mV](maximum) *9	250	350	450	600	600	600	750	750				
g.Recovery Time *4,*9	20mS(maximum)											
Rise up time	10mS(maximum) at rated input/output											
Hold up time	Not specified											
Functions												
Overcurrent Protection	Current Limiting with automatic recovery at discontinuous short circuit conditions											
>=110% of Rated Output Current [A]	0.33	0.143	0.11	0.0715	0.0715	0.0715	0.055	0.055				
Overvoltage Protection	Not available											
Remote Sence	Not available											
Trimming of output voltage[mV]	Not available											
Input Fuse	Installed[2A]											
Environmental												
Operating Temperature	-20 to 71°C											
(derating)	3.5%/°C(50°C to 71°C) (out of warranty >=50°C at input above 63V)											
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 50MW(minimum) by DC500V insulation tester											
Capacitance(input-output) [pF](typical)	2200											
Vibration	5-10Hz:10mm double amplitude,10-55Hz:2G,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)											
Shock	30G											
Cooling	Convection											
Weight (typical)	open board type:5g											

*1 at 25°C and rated input/output

*2 OEJ**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 output

*5 when output current changed from 0mA to rated current at rated input OEJ**WC1224 satisfies the above-mentioned specifications at the same load conditions

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

*7 at -20 to +71°C

*8 for 7hours from 1hour after switch-on at 25°C and rated input/output

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

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Specifications OEJ**SC/WC2448 1.5WATTS/SINGLE/2 OUTPUT	Model											
	OEJ05SC2448		OEJ12SC2448		OEJ15SC2448		OEJ24SC2448		OEJ22WC2448		OEJ23WC2448	
Input Characteristic												
Input Voltage DC[V]	24	48	24	48	24	48	24	48	24	48	24	48
Input Range DC[V]	18-72											
Input Current [A]	Not specified											
Input Range												
at no load [mA](typical)	5	5	6	7	7	8	7	8	7	8	9	10
at full load[mA](typical)	82	43.4	83	44	79	42.2	79	43.3	85	45.1	80	43.4
Line Back Noise [mVp-p](typical)	400	400	400	400	400	400	400	400	400	400	400	400
Efficiency [%] (typical) *1	76	72	78	74	79	74	82	75	76	72	78	72
Output Voltage [V]	5		12		15		24		+12	-12	+15	-15
Output Current [A]	0.3		0.13		0.10		0.065		0.065		0.050	
Voltage Tolerance +/-[mV](maximum) *2	150		360		450		720		360		450	
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		250		250		300		250	250	250	250
c.Static Load Regulation +/-[mV](maximum) *5	25		60		75		120		60	60	75	75
+/-[mV](maximum) *6									600	600	750	250
d.Temperature Coefficient *7	0.03%/°C(maximum)											
e.Drift[mV](maximum) *8	45		75		90		135		75		90	
f.Dynamic Load Regulation [mV](typical) *9	250		350		450		600		600		750	
g.Recovery Time *4,*9	20mS(maximum)											
Rise up time	10ms(maximum) at rated input/output											
Hold up time	Not specified											
Functions												
Overcurrent Protection	Current Limiting with automatic recovery at discontinuous short circuit conditions											
>=110% of Rated Output Current [A]	0.33		0.143		0.11		0.0715		0.0715	0.0715	0.055	0.55
Overvoltage Protection	Not available											
Remote Sence	Not available											
Trimming of output voltage[mV]	Not available											
Input Fuse	Installed [2A]											
Environmental												
Operating Temperature	-20 to 71°C											
(derating)	3.5%/°C (50°C to 71°C)(out of warranty >= 50°C at input above 63V)											
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 50MW(minimum) by DC500V insulation tester											
Capacitance(input-output) [pF](typical)	2200											
Vibration	5-10Hz:10mm double amplitude,10-55Hz:2G,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)											
Shock	30G											
Cooling	Convection											
Weight (typical)	open board type:5g											

*1 at 25°C and rated input/output

*2 OEJ**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 at rated input OEJ**WC2448 satisfies the above-mentioned specifications at the same load

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

*7 at -20 to +71°C

*8 for 7hours from 1hour after switch-on at 25°C and rated input/output

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

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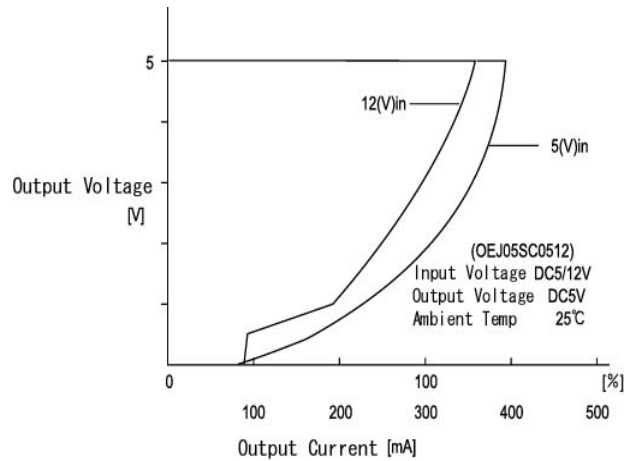
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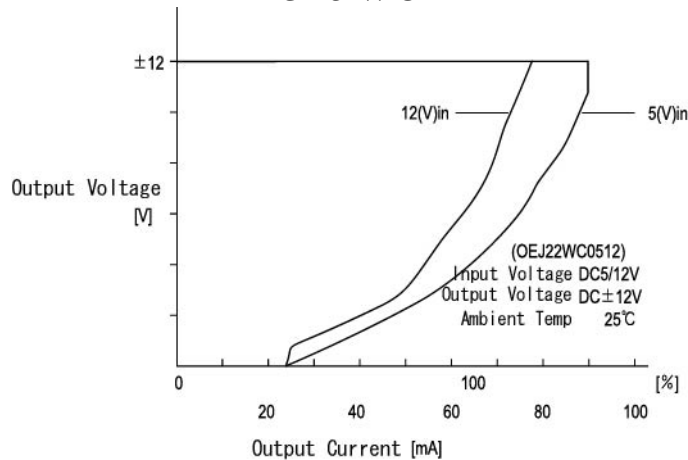
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OCP CURVES:

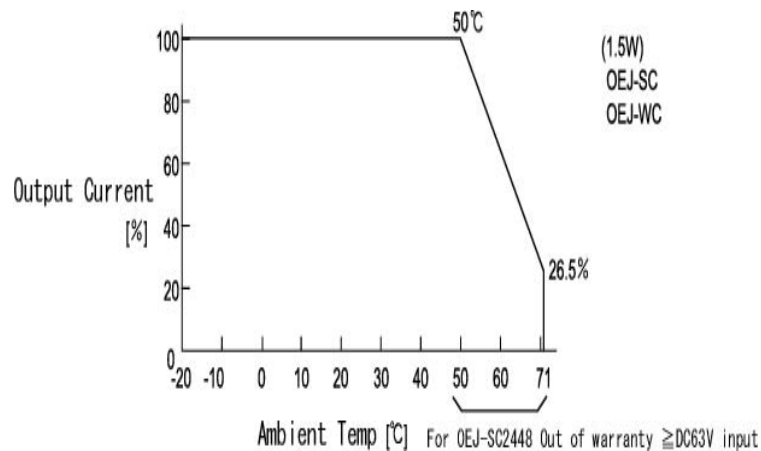
OEJ-SC:



OEJ-WC



DERATING CURVE

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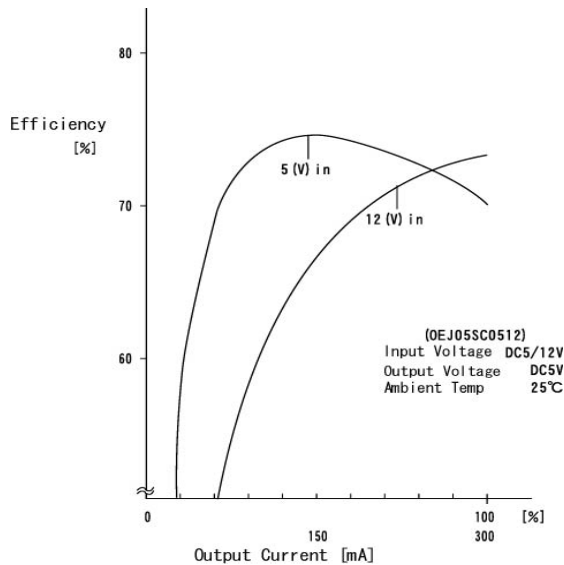
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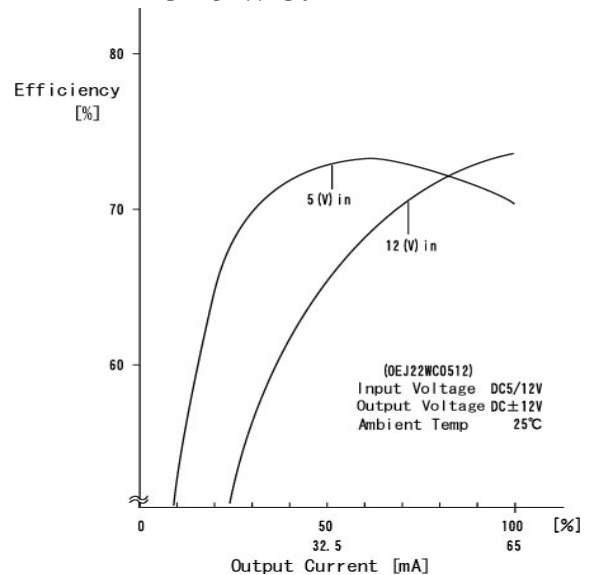
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EFFICIENCY CURVE

OEJ-SC:

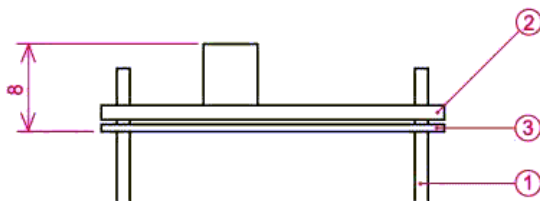
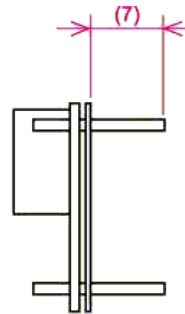
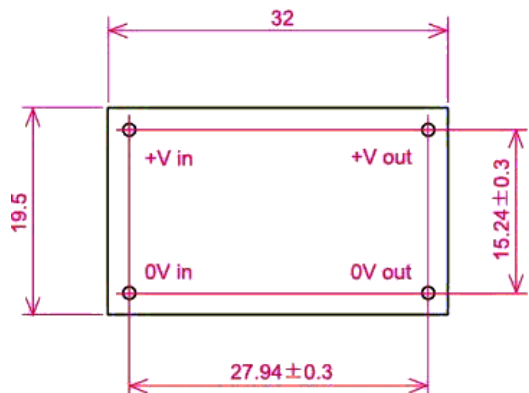


OEJ-WC:



DIMENSION DIAGRAM

OEJ-SC:



- ① 1.0DIA PIN Material:BsB 2700 1/2H
Copper Plating 1~3μm
Solder Plating 3~8μm

② Double-sided PCB FR4t=1.0

③ t=0.5 Insulator V0

* Tolerance ±0.5

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[OEJ22WC1224](#) [OEJ23WC2448](#) [OEJ22WC2448](#) [OEJ05SC2448](#) [OEJ24SC2448](#) [OEJ15SC2448](#) [OEJ12SC2448](#)
[OEJ12SC1224](#) [OEJ15SC1224](#) [OEJ24SC1224](#) [OEJ05SC1224](#)