

# COSEL

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## On Board Type DC-DC converter **MG15/30 series**

Compact and general use type  
Isolated type DC-DC converter

**10 years warranty**







# MG15/30 series

## Contents

Contents	1
Features of MG series	2
MGS15	3
MGS30	5
MGW15	7
MGW30	9
MGFS15	11
MGFS30	13
MGFW15	15
MGFW30	17



External view	Item	Model	Input voltage [V]	Output voltage[V] / Output current[A]						External dimension [mm] W×H×D
				Single output				2 output		
				3.3[V]	5[V]	12[V]	15[V]	±5(+10)[V]	±12(+24)[V]	
	MG15	DC9-18	4	3	1.3	1	1.5	0.65	0.5	25.4×9.9×25.4
		DC18-36	4	3	1.3	1	1.5	0.65	0.5	
		DC36-76	4	3	1.3	1	1.5	0.65	0.5	
	MGF15 (Wide input)	DC9-36	4	3	1.3	1	1.5	0.65	0.5	25.4×9.9×25.4
		DC18-76	4	3	1.3	1	1.5	0.65	0.5	
	MG30	DC9-18	8	6	2.5	2	2.5	1.25	1	25.4×9.9×50.8
		DC18-36	8	6	2.5	2	2.5	1.25	1	
		DC36-76	8	6	2.5	2	2.5	1.25	1	
	MGF30 (Wide input)	DC9-36	7.5	6	2.5	2	2	1.25	1	25.4×9.9×50.8
		DC18-76	7.5	6	2.5	2	2	1.25	1	

# MG15/30 series

Compact, general use and isolated type  
DC-DC converter

Lineup of 70 models

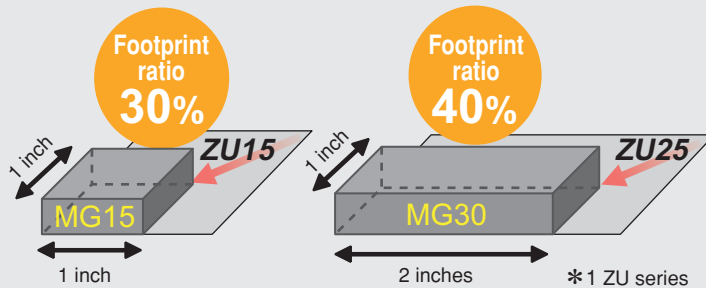
## World standard 1 × 1 inch, 1 × 2 inch Isolated type DC-DC converter

When compared to conventional models (our ZU series), downsizing and light-weighted system are achieved. Thus, long-term reliability and high efficiency are both achieved.

In 15/30W class, wide input type are added. With whelming variations, free choice than ever is achieved. Thus, RoHS compliant product that is environment friendly.

### Best-matching to downsizing of the board area

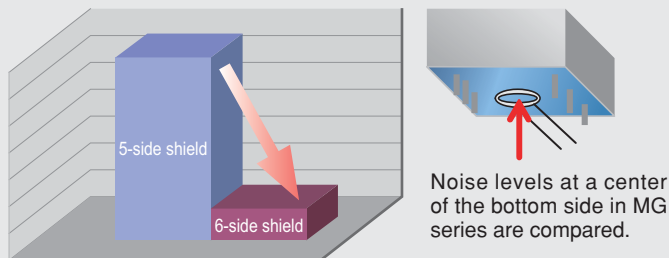
When compared to conventional systems (\*1), footprint area on board is 40% or smaller.



### Noise countermeasure with 6-side shield.

As well as a case, the bottom surface is also shielded for lowering the noise.

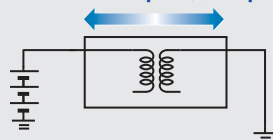
#### Bottom shield effect



### Isolation DC1,500V (1 min.)

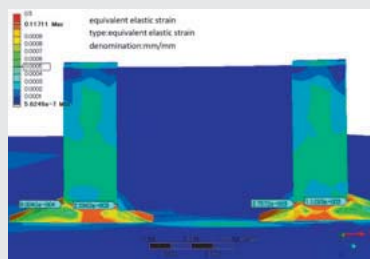
Isolation between input and output is DC1,500V (1 min) and safety level has been increased.

#### Between input ↔ output



### 10 years warranty

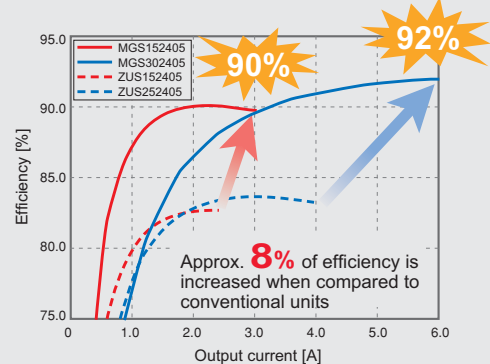
By securing reliability of parts soldering sections, long-term reliability has been achieved.



Warping amount simulation at the ceramic capacitor electrode with a stress simulator.

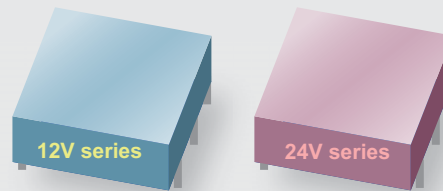
### High efficiency, light-weighted, compact size

Compact sizing and light-weighted are achieved by applying synchronized rectification circuit.



### Wide input type is newly added to the lineup.

Conventionally, two systems were used depending on input voltage. With MG series wide input type, only one system is required. Therefore, power supply can be used commonly.



Conventionally, systems of two types were required.



However, corresponding with one system is now available.

Reducing the management cost

### Other features

- Wide operating temperature range (-40 to +85°C)
- Remote control function
- Output voltage external variation function (single output)
- Fuse is built-in at the input side
- Built-in synchronized rectification circuit (single output)
- Aluminum electrolysis / tantalum electrolytic capacitor unused
- Safety standard (UL, C-UL, EN) certifications



\* Link to [www.cosel.co.jp/en](http://www.cosel.co.jp/en) for the latest product information.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- G: Capacitor between Input and Output is removed.
- R: with Remote ON/OFF (Positive logic control)

MODEL	MGS15123R3	MGS151205	MGS151212	MGS151215	MGS15243R3	MGS152405	MGS152412	MGS152415
MAX OUTPUT WATTAGE[W]	13.2	15	15.6	15	13.2	15	15.6	15
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12	15	3.3	5	12
	CURRENT[A]	4	3	1.3	1	4	3	1.3

## SPECIFICATIONS

	MODEL	MGS15123R3	MGS151205	MGS151212	MGS151215	MGS15243R3	MGS152405	MGS152412	MGS152415	
INPUT	VOLTAGE[V]	DC9 - 18				DC18 - 36				
	CURRENT[A] *2	1.28typ	1.44typ	1.49typ	1.42typ	0.63typ	0.70typ	0.73typ	0.70typ	
	EFFICIENCY[%] *2	86typ	87typ	87typ	88typ	87typ	89typ	89typ	89typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15	
	CURRENT[A]	4	3	1.3	1	4	3	1.3	1	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	13.2max	20max	48max	60max	13.2max	20max	48max	60max	
	RIPPLE[mVp-p] *3	-20 to +60°C	75max	75max	100max	100max	75max	75max	100max	100max
		-40 to -20°C	100max	100max	120max	120max	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	-20 to +60°C	100max	100max	120max	120max	100max	100max	120max	120max
		-40 to -20°C	200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max	180max	50max	50max	150max	180max
	-40 to -20°C	80max	80max	240max	290max	80max	80max	240max	290max	
	DRIFT[mV] *4	20max	20max	48max	60max	20max	20max	48max	60max	
START-UP TIME[ms]	30max (Minimum input, I <sub>o</sub> =100%)									
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed (TRM pin open) Available to adjust ±10% by external variable resistor									
OUTPUT VOLTAGE SETTING[V]*5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically								
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)								

MODEL	MGS15483R3	MGS154805	MGS154812	MGS154815
MAX OUTPUT WATTAGE[W]	13.2	15	15.6	15
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	4	3	1.3

## SPECIFICATIONS

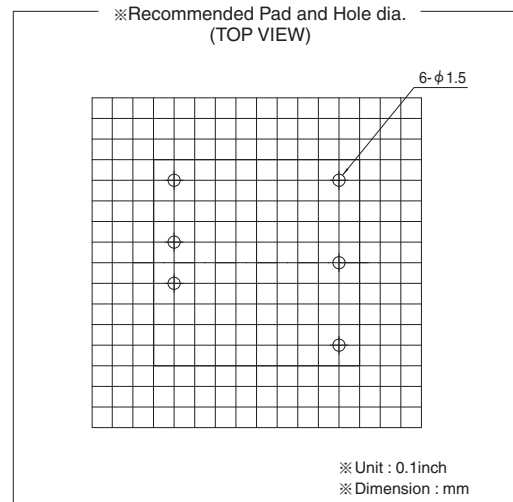
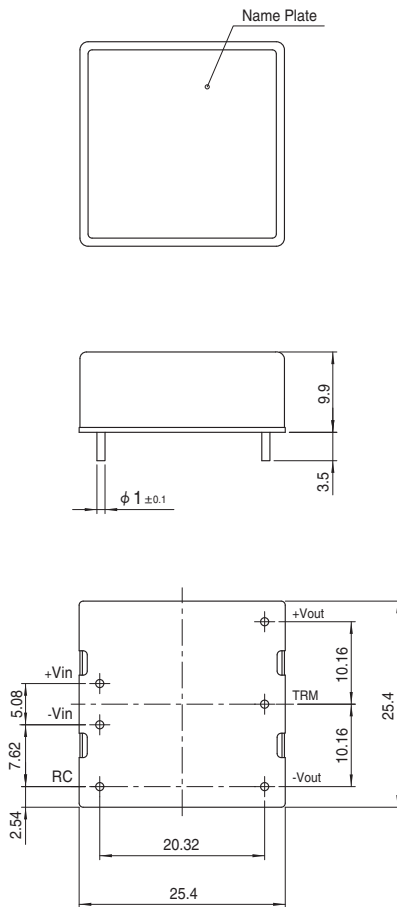
	MODEL	MGS15483R3	MGS154805	MGS154812	MGS154815	
INPUT	VOLTAGE[V]	DC36 - 76				
	CURRENT[A] *2	0.32typ	0.35typ	0.36typ	0.35typ	
	EFFICIENCY[%] *2	87typ	89typ	90typ	90typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	4	3	1.3	1	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	13.2max	20max	48max	60max	
	RIPPLE[mVp-p] *3	-20 to +60°C	75max	75max	100max	100max
		-40 to -20°C	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	-20 to +60°C	100max	100max	120max	120max
		-40 to -20°C	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max	180max
	-40 to -20°C	80max	80max	240max	290max	
	DRIFT[mV] *4	20max	20max	48max	60max	
START-UP TIME[ms]	30max (Minimum input, I <sub>o</sub> =100%)					
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed (TRM pin open) ±10% adjustable by external VR					
OUTPUT VOLTAGE SETTING[V]*5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				

**GENERAL SPECIFICATIONS**

ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis
SAFETY	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis
	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	25.4 X 9.9 X 25.4mm (W X H X D) / 20g max
	COOLING METHOD	Convection/Forced air

- \*1 MGW15xx05/MGW15xx12/MGW15xx15 is available as single output, +10V/+24V/+30V
- \*2 Rated input 12V, 24V or 48V DC I<sub>o</sub>=100%
- \*3 Ripple and Ripple Noise is measured by using test board with in 50mm from output pin terminals.
- \*4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- \*5 Rated input voltage (DC12V, DC24V, DC48V), rated output wattage, ambient temperature at 25°C.
- \* Parallel operation with other model is not possible.

**External view**



- ※ Tolerance ±0.5
- ※ Dimensions in mm
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Mass 20g or less



RoHS



\* Link to [www.cosel.co.jp/en](http://www.cosel.co.jp/en) for the latest product information.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
  - G: Capacitor between Input and Output is removed.
  - R: with Remote ON/OFF (Positive logic control)

MODEL	MGS30123R3	MGS301205	MGS301212	MGS301215	MGS30243R3	MGS302405	MGS302412	MGS302415
MAX OUTPUT WATTAGE[W]	26.4	30	30	30	26.4	30	30	30
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12	15	3.3	5	12
	CURRENT[A]	8	6	2.5	2	8	6	2.5

## SPECIFICATIONS

	MODEL	MGS30123R3	MGS301205	MGS301212	MGS301215	MGS30243R3	MGS302405	MGS302412	MGS302415	
INPUT	VOLTAGE[V]	DC9 - 18				DC18 - 36				
	CURRENT[A] *2	2.47typ	2.78typ	2.78typ	2.78typ	1.22typ	1.36typ	1.37typ	1.37typ	
	EFFICIENCY[%] *2	89typ	90typ	90typ	90typ	90typ	92typ	91typ	91typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15	
	CURRENT[A]	8	6	2.5	2	8	6	2.5	2	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	13.2max	20max	48max	60max	13.2max	20max	48max	60max	
	RIPPLE[mVp-p]	-20 to +60°C	75max	75max	100max	100max	75max	75max	100max	100max
		*3 -40 to -20°C	100max	100max	120max	120max	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p]	-20 to +60°C	100max	100max	120max	120max	100max	100max	120max	120max
		*3 -40 to -20°C	200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max	180max	50max	50max	150max	180max
		-40 to -20°C	80max	80max	240max	290max	80max	80max	240max	290max
	DRIFT[mV] *4	20max	20max	48max	60max	20max	20max	48max	60max	
START-UP TIME[ms]	30max (Minimum input, Io=100%)									
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed (TRM pin open) ±10% adjustable by external VR									
OUTPUT VOLTAGE SETTING[V]*5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically								
	OVERVOLTAGE PROTECTION[V]	Works over 120 to 160% of rating								
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)								

MODEL	MGS30483R3	MGS304805	MGS304812	MGS304815
MAX OUTPUT WATTAGE[W]	26.4	30	30	30
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	8	6	2.5

## SPECIFICATIONS

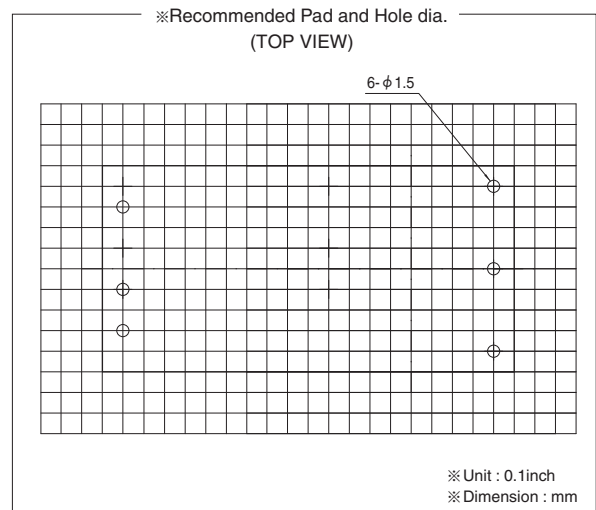
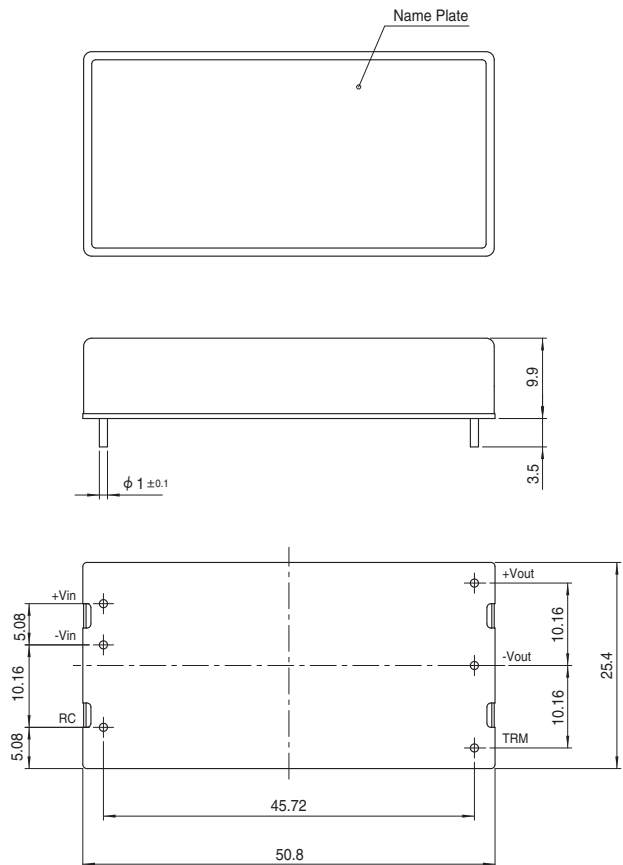
	MODEL	MGS30483R3	MGS304805	MGS304812	MGS304815	
INPUT	VOLTAGE[V]	DC36 - 76				
	CURRENT[A] *2	0.61typ	0.69typ	0.69typ	0.69typ	
	EFFICIENCY[%] *2	90typ	91typ	91typ	91typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	8	6	2.5	2	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	13.2max	20max	48max	60max	
	RIPPLE[mVp-p]	-20 to +60°C	75max	75max	100max	100max
		*3 -40 to -20°C	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p]	-20 to +60°C	100max	100max	120max	120max
		*3 -40 to -20°C	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max	180max
		-40 to -20°C	80max	80max	240max	290max
	DRIFT[mV] *4	20max	20max	48max	60max	
START-UP TIME[ms]	30max (Minimum input, Io=100%)					
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed (TRM pin open) ±10% adjustable by external VR					
OUTPUT VOLTAGE SETTING[V]*5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION[V]	Works over 120 to 160% of rating				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				

**GENERAL SPECIFICATIONS**

ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis
	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	25.4 X 9.9 X 50.8mm (W X H X D) / 40g max
	COOLING METHOD	Convection/Forced air

- \*1 MGW30xx05/MGW30xx12/MGW30xx15 is available as single output, +10V/+24V/+30V
- \*2 Rated input 12V, 24V or 48V DC I<sub>o</sub>=100%
- \*3 Ripple and Ripple Noise is measured by using test board with in 50mm from output pin terminals.
- \*4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- \*5 Rated input voltage (DC12V, DC24V, DC48V), rated output wattage, ambient temperature at 25°C.
- \* Parallel operation with other model is not possible.

**External view**



- ※ Tolerance ±0.5
- ※ Dimensions in mm
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Mass 40g or less



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- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- G: Capacitor between Input and Output is removed.
- R: with Remote ON/OFF (Positive logic control)

MODEL	MGW151205	MGW151212	MGW151215	MGW152405	MGW152412	MGW152415	MGW154805	MGW154812	MGW154815	
MAX OUTPUT WATTAGE[W]	15	15.6	15	15	15.6	15	15	15.6	15	
DC OUTPUT	VOLTAGE[V] *1	±5 or +10	±12 or +24	±15 or +30	±5 or +10	±12 or +24	±15 or +30	±5 or +10	±12 or +24	±15 or +30
	CURRENT[A]	1.5	0.65	0.5	1.5	0.65	0.5	1.5	0.65	0.5

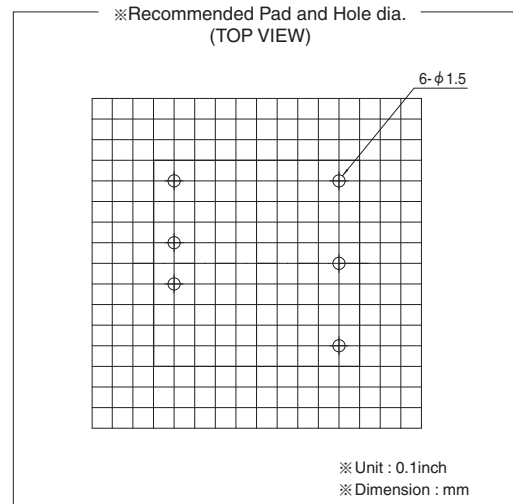
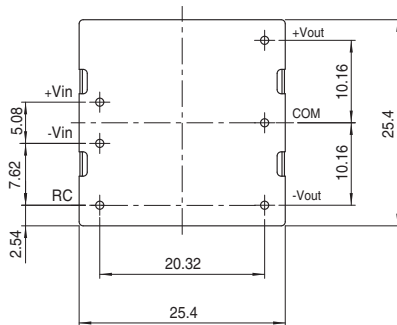
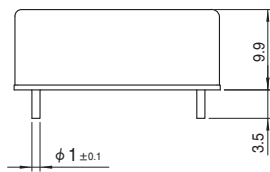
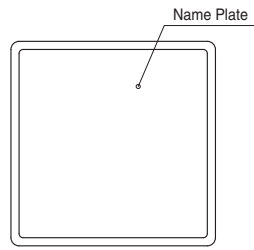
## SPECIFICATIONS

	MODEL	MGW151205	MGW151212	MGW151215	MGW152405	MGW152412	MGW152415	MGW154805	MGW154812	MGW154815	
INPUT	VOLTAGE[V]	DC9 - 18			DC18 - 36			DC36 - 76			
	CURRENT[A] *2	1.48typ	1.49typ	1.42typ	0.74typ	0.74typ	0.70typ	0.37typ	0.37typ	0.35typ	
	EFFICIENCY[%] *2	84typ	87typ	88typ	84typ	88typ	89typ	84typ	89typ	89typ	
OUTPUT	VOLTAGE[V]	±5(+10)	±12(+24)	±15(+30)	±5(+10)	±12(+24)	±15(+30)	±5(+10)	±12(+24)	±15(+30)	
	CURRENT[A]	1.5	0.65	0.5	1.5	0.65	0.5	1.5	0.65	0.5	
	LINE REGULATION[mV]	40max	60max	75max	40max	60max	75max	40max	60max	75max	
	CROSS REGULATION[mV]	*3	500max *5	600max	750max	500max *5	600max	750max	500max *5	600max	750max
		*4	250max	480max	600max	250max	480max	600max	250max	480max	600max
	RIPPLE[mVp-p] *6	-20 to +60°C	100max	100max	100max	100max	100max	100max	100max	100max	100max
		-40 to -20°C	120max	120max	120max	120max	120max	120max	120max	120max	120max
	RIPPLE NOISE[mVp-p] *6	-20 to +60°C	120max	120max	120max	120max	120max	120max	120max	120max	120max
		-40 to -20°C	200max	200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	150max	180max	50max	150max	180max	50max	150max	180max
-40 to -20°C	80max	240max	290max	80max	240max	290max	80max	240max	290max		
DRIFT[mV] *7	50max	50max	60max	50max	50max	60max	50max	50max	60max		
START-UP TIME[ms]	30max (Minimum input, Io=100%)										
OUTPUT VOLTAGE SETTING[V] *8	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically									
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)									
ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)									
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)									
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)									
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max									
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max									
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis									
	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis									
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1									
OTHERS	CASE SIZE/WEIGHT	25.4 X 9.9 X 25.4mm (W X H X D) / 20g max									
	COOLING METHOD	Convection/Forced air									

\*1 Single output +10V, +24V, +30V with no use of COM.  
 \*2 Rated input 12V, 24V or 48V Io=100%  
 \*3 An output load is 100%, the other load is 5% to 100%.  
 \*4 An output load is 100%, the other load is 20% to 100%.  
 \*5 Refer to the instruction manual 11.  
 \*6 Ripple and Ripple Noise is measured by using test board with in 50mm from output pin terminals.  
 \*7 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.  
 \*8 Rated input voltage (DC12V, DC24V, DC48V), rated output wattage, ambient temperature at 25°C.  
 \* Parallel operation with other model is not possible.



External view



- ※ Tolerance  $\pm 0.5$
- ※ Dimensions in mm
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Mass 20g or less



RoHS



\* Link to [www.cosec.co.jp/en](http://www.cosec.co.jp/en) for the latest product information.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- G: Capacitor between Input and Output is removed.
- R: with Remote ON/OFF (Positive logic control)

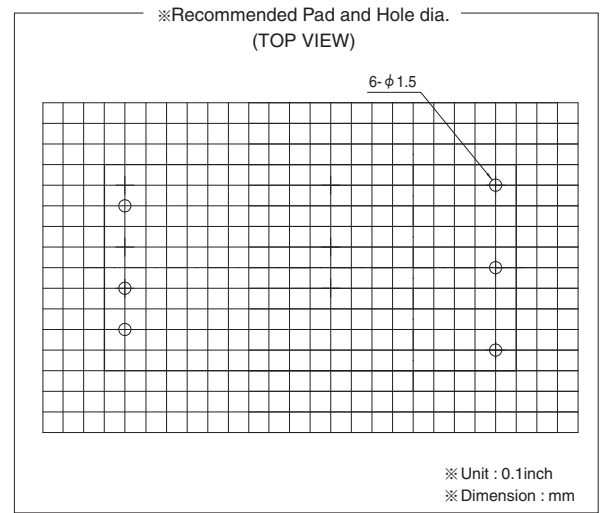
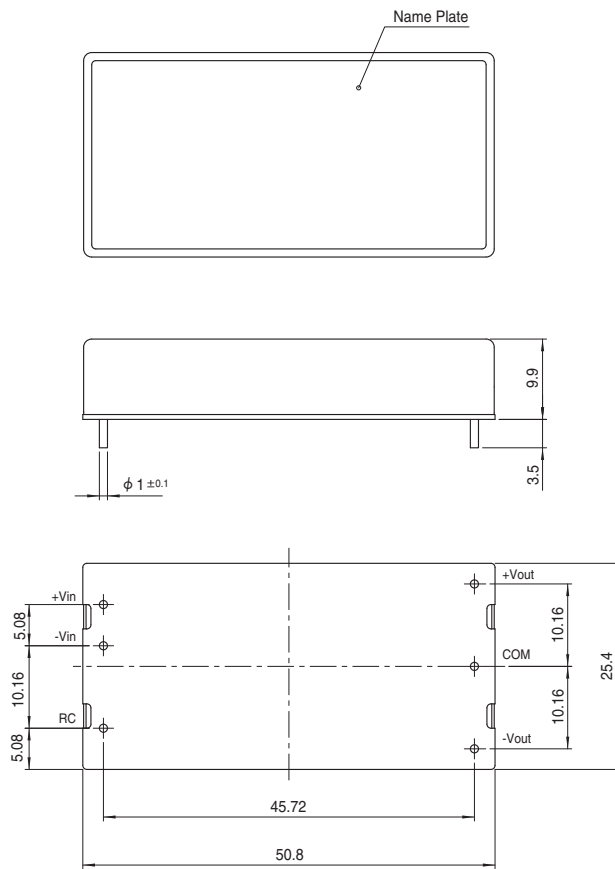
MODEL	MGW301205	MGW301212	MGW301215	MGW302405	MGW302412	MGW302415	MGW304805	MGW304812	MGW304815	
MAX OUTPUT WATTAGE[W]	25	30	30	25	30	30	25	30	30	
DC OUTPUT	VOLTAGE[V] *1	±5 or +10	±12 or +24	±15 or +30	±5 or +10	±12 or +24	±15 or +30	±5 or +10	±12 or +24	±15 or +30
	CURRENT[A]	2.5	1.25	1	2.5	1.25	1	2.5	1.25	1

## SPECIFICATIONS

	MODEL	MGW301205	MGW301212	MGW301215	MGW302405	MGW302412	MGW302415	MGW304805	MGW304812	MGW304815	
INPUT	VOLTAGE[V]	DC9 - 18			DC18 - 36			DC36 - 76			
	CURRENT[A] *2	2.42typ	2.81typ	2.81typ	1.21typ	1.40typ	1.40typ	0.61typ	0.70typ	0.70typ	
	EFFICIENCY[%] *2	86typ	89typ	89typ	86typ	89typ	89typ	86typ	89typ	89typ	
OUTPUT	VOLTAGE[V]	±5(+10)	±12(+24)	±15(+30)	±5(+10)	±12(+24)	±15(+30)	±5(+10)	±12(+24)	±15(+30)	
	CURRENT[A]	2.5	1.25	1	2.5	1.25	1	2.5	1.25	1	
	LINE REGULATION[mV]	40max	60max	75max	40max	60max	75max	40max	60max	75max	
	CROSS REGULATION[mV]	*3	500max *5	600max	750max	500max *5	600max	750max	500max *5	600max	750max
		*4	250max	480max	600max	250max	480max	600max	250max	480max	600max
	RIPPLE[mVp-p]	-20 to +60°C	100max	100max	100max	100max	100max	100max	100max	100max	100max
		-40 to -20°C	120max	120max	120max	120max	120max	120max	120max	120max	120max
	RIPPLE NOISE[mVp-p]	-20 to +60°C	120max	120max	120max	120max	120max	120max	120max	120max	120max
		-40 to -20°C	200max	200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	150max	180max	50max	150max	180max	50max	150max	180max
		-40 to -20°C	80max	240max	290max	80max	240max	290max	80max	240max	290max
DRIFT[mV] *7	50max	50max	60max	50max	50max	60max	50max	50max	60max		
START-UP TIME[ms]	30max (Minimum input, I <sub>o</sub> =100%)										
OUTPUT VOLTAGE SETTING[V]*8	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically									
	OVERVOLTAGE PROTECTION[V]	Works over 120 to 160% of rating									
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)									
ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)									
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)									
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)									
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max									
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max									
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis									
	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis									
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1									
OTHERS	CASE SIZE/WEIGHT	25.4 X 9.9 X 50.8mm (W X H X D) / 40g max									
	COOLING METHOD	Convection/Forced air									

\*1 Single output +10V, +24V, +30V with no use of COM.  
 \*2 Rated input 12V, 24V or 48V DC I<sub>o</sub>=100%  
 \*3 Symmetrical loading from 5% to 100%.  
 \*4 Symmetrical loading from 20% to 100%.  
 \*5 Refer to the instruction manual 11.  
 \*6 Ripple and Ripple Noise is measured by using test board with in 50mm from output pin terminals.  
 \*7 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.  
 \*8 Rated input voltage (DC12V, DC24V, DC48V), rated output wattage, ambient temperature at 25°C.  
 \* Parallel operation with other model is not possible.

External view



- ※ Tolerance ±0.5
- ※ Dimensions in mm
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Mass 40g or less



\* Link to [www.cosec.co.jp/en](http://www.cosec.co.jp/en) for the latest product information.

- ① Series name
  - ② Single output
  - ③ Output wattage
  - ④ Input voltage
  - ⑤ Output voltage
  - ⑥ Optional
- G : Capacitor between Input and Output is removed.  
R : with Remote ON/OFF (Positive logic control)

MODEL	MGFS15243R3	MGFS152405	MGFS152412	MGFS152415
MAX OUTPUT WATTAGE[W]	13.2	15	15.6	15
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	4	3	1.3

## SPECIFICATIONS

	MODEL	MGFS15243R3	MGFS152405	MGFS152412	MGFS152415	
INPUT	VOLTAGE[V]	DC9 - 36				
	CURRENT[A] *2	0.63typ	0.71typ	0.73typ	0.70typ	
	EFFICIENCY[%] *2	87typ	88typ	89typ	89typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	4	3	1.3	1	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	13.2max	20max	48max	60max	
	RIPPLE[mVp-p] *3	-20 to +60°C	75max	75max	100max	100max
		-40 to -20°C	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	-20 to +60°C	100max	100max	120max	120max
		-40 to -20°C	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max	180max
	-40 to -20°C	80max	80max	240max	290max	
DRIFT[mV] *4	20max	20max	48max	60max		
START-UP TIME[ms]	30max (Minimum input, I <sub>o</sub> =100%)					
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed (TRM pin open) ±10% adjustable by external VR					
OUTPUT VOLTAGE SETTING[V] *5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				

MODEL	MGFS15483R3	MGFS154805	MGFS154812	MGFS154815
MAX OUTPUT WATTAGE[W]	13.2	15	15.6	15
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	4	3	1.3

## SPECIFICATIONS

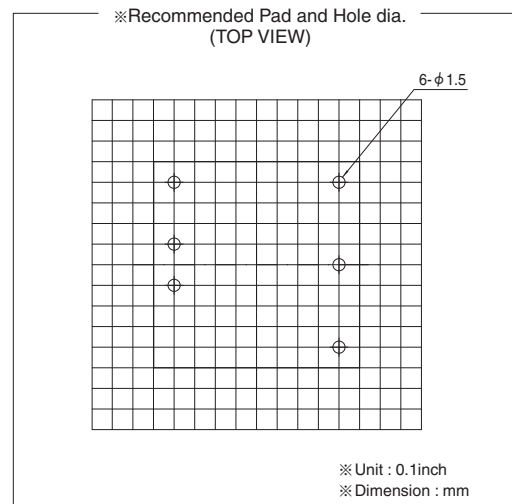
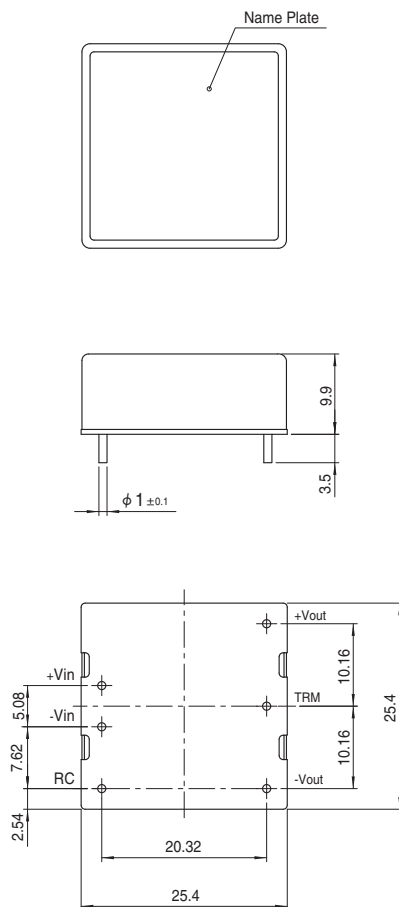
	MODEL	MGFS15483R3	MGFS154805	MGFS154812	MGFS154815	
INPUT	VOLTAGE[V]	DC18 - 76				
	CURRENT[A] *2	0.32typ	0.36typ	0.37typ	0.35typ	
	EFFICIENCY[%] *2	87typ	88typ	88typ	89typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	4	3	1.3	1	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	13.2max	20max	48max	60max	
	RIPPLE[mVp-p] *3	-20 to +60°C	75max	75max	100max	100max
		-40 to -20°C	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	-20 to +60°C	100max	100max	120max	120max
		-40 to -20°C	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max	180max
	-40 to -20°C	80max	80max	240max	290max	
DRIFT[mV] *4	20max	20max	48max	60max		
START-UP TIME[ms]	30max (Minimum input, I <sub>o</sub> =100%)					
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed (TRM pin open) ±10% adjustable by external VR					
OUTPUT VOLTAGE SETTING[V] *5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				

### GENERAL SPECIFICATIONS

ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis
SAFETY	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	25.4 X 9.9 X 25.4mm (W X H X D) / 20g max
	COOLING METHOD	Convection/Forced air

- \*1 MGFW15xx05/MGFW15xx12/MGFW15xx15 is available as single output, +10V/+24V/+30V
- \*2 Rated input 12V, 24V or 48V DC I<sub>o</sub>=100%
- \*3 Ripple and Ripple Noise is measured by using test board with in 50mm from output pin terminals.
- \*4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- \*5 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25°C.
- \* Parallel operation with other model is not possible.

### External view



- ※ Tolerance ±0.5
- ※ Dimensions in mm
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Mass 20g or less



\* Link to [www.cosec.co.jp/en](http://www.cosec.co.jp/en) for the latest product information.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
  - G: Capacitor between Input and Output is removed.
  - R: with Remote ON/OFF (Positive logic control)

MODEL	MGFS30243R3	MGFS302405	MGFS302412	MGFS302415
MAX OUTPUT WATTAGE[W]	24.75	30	30	30
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	7.5	6	2.5

## SPECIFICATIONS

	MODEL	MGFS30243R3	MGFS302405	MGFS302412	MGFS302415	
INPUT	VOLTAGE[V]	DC9 - 36				
	CURRENT[A] *2	1.17typ	1.40typ	1.40typ	1.40typ	
	EFFICIENCY[%] *2	88typ	89typ	89typ	89typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	7.5	6	2.5	2	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	13.2max	20max	48max	60max	
	RIPPLE[mVp-p]	-20 to +60°C	75max	75max	100max	100max
		*3 -40 to -20°C	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p]	-20 to +60°C	100max	100max	120max	120max
		*3 -40 to -20°C	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max	180max
		-40 to -20°C	80max	80max	240max	290max
	DRIFT[mV] *4	20max	20max	48max	60max	
START-UP TIME[ms]	30max (Minimum input, Io=100%)					
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed (TRM pin open) ±10% adjustable by external VR					
OUTPUT VOLTAGE SETTING[V]*5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION[V]	Works over 120 to 160% of rating				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				

MODEL	MGFS30483R3	MGFS304805	MGFS304812	MGFS304815
MAX OUTPUT WATTAGE[W]	24.75	30	30	30
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	7.5	6	2.5

## SPECIFICATIONS

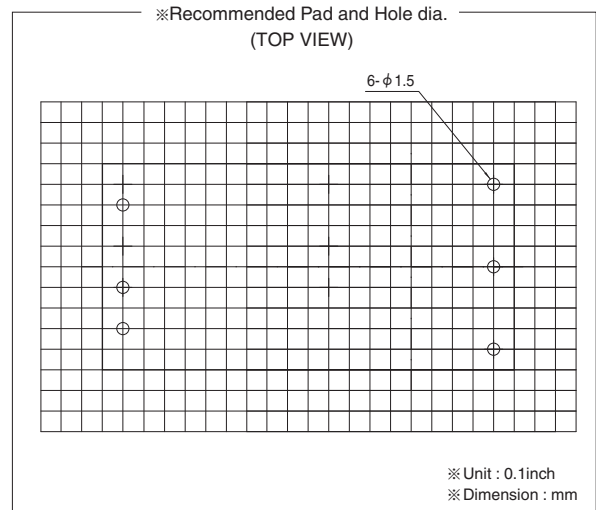
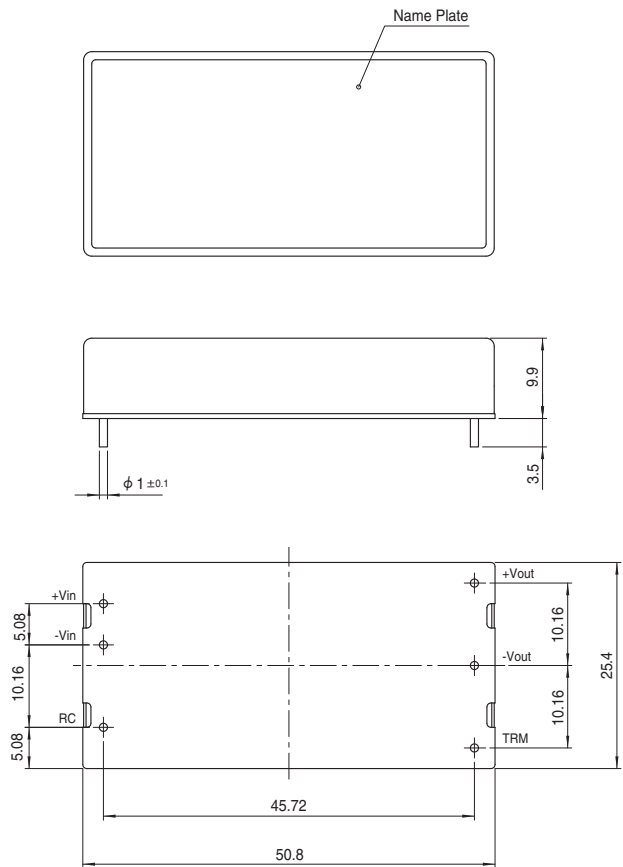
	MODEL	MGFS30483R3	MGFS304805	MGFS304812	MGFS304815	
INPUT	VOLTAGE[V]	DC18 - 76				
	CURRENT[A] *2	0.59typ	0.70typ	0.70typ	0.70typ	
	EFFICIENCY[%] *2	88typ	89typ	89typ	89typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	7.5	6	2.5	2	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	13.2max	20max	48max	60max	
	RIPPLE[mVp-p]	-20 to +60°C	75max	75max	100max	100max
		*3 -40 to -20°C	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p]	-20 to +60°C	100max	100max	120max	120max
		*3 -40 to -20°C	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max	180max
		-40 to -20°C	80max	80max	240max	290max
	DRIFT[mV] *4	20max	20max	48max	60max	
START-UP TIME[ms]	30max (Minimum input, Io=100%)					
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed (TRM pin open) ±10% adjustable by external VR					
OUTPUT VOLTAGE SETTING[V]*5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION[V]	Works over 120 to 160% of rating				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				

**GENERAL SPECIFICATIONS**

ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis
	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	25.4 X 9.9 X 50.8mm (W X H X D) / 40g max
	COOLING METHOD	Convection/Forced air

- \*1 MGF30xx05/MGF30xx12/MGF30xx15 is available as single output, +10V/+24V/+30V
- \*2 Rated input 12V, 24V or 48V DC I<sub>o</sub>=100%
- \*3 Ripple and Ripple Noise is measured by using test board with in 50mm from output pin terminals.
- \*4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- \*5 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25°C.
- \* Parallel operation with other model is not possible.

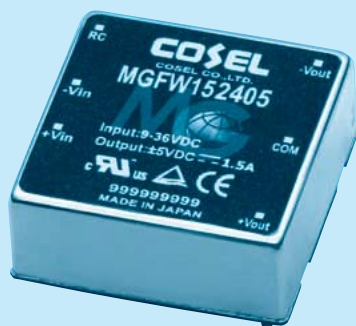
**External view**



- ※ Tolerance ±0.5
- ※ Dimensions in mm
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Mass 40g or less



RoHS



\* Link to [www.cosel.co.jp/en](http://www.cosel.co.jp/en) for the latest product information.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- G: Capacitor between Input and Output is removed.
- R: with Remote ON/OFF (Positive logic control)

MODEL	MGFW152405	MGFW152412	MGFW152415	MGFW154805	MGFW154812	MGFW154815
MAX OUTPUT WATTAGE[W]	15	15.6	15	15	15.6	15
DC OUTPUT	VOLTAGE[V] *1	±5 or +10	±12 or +24	±15 or +30	±5 or +10	±12 or +24
	CURRENT[A]	1.5	0.65	0.5	1.5	0.65

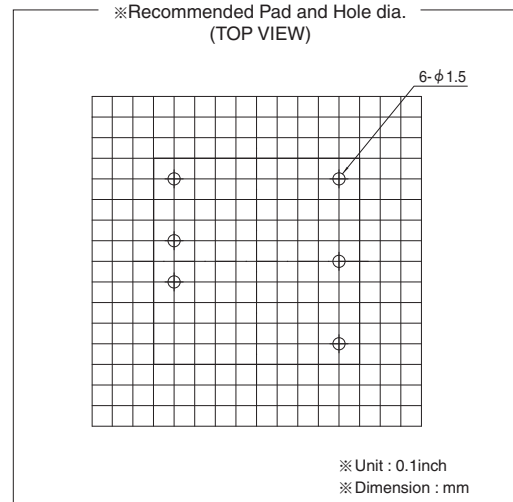
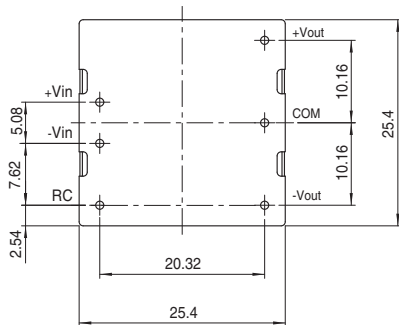
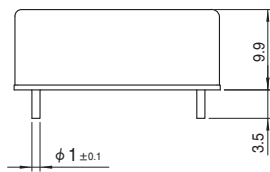
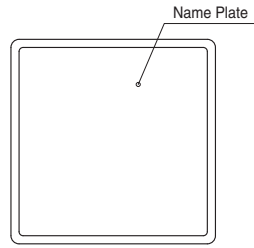
## SPECIFICATIONS

	MODEL	MGFW152405	MGFW152412	MGFW152415	MGFW154805	MGFW154812	MGFW154815	
INPUT	VOLTAGE[V]	DC9 - 36			DC18 - 76			
	CURRENT[A] *2	0.74typ	0.74typ	0.70typ	0.37typ	0.37typ	0.36typ	
	EFFICIENCY[%] *2	84typ	88typ	89typ	84typ	87typ	88typ	
OUTPUT	VOLTAGE[V]	±5(+10)	±12(+24)	±15(+30)	±5(+10)	±12(+24)	±15(+30)	
	CURRENT[A]	1.5	0.65	0.5	1.5	0.65	0.5	
	LINE REGULATION[mV]	40max	60max	75max	40max	60max	75max	
	CROSS REGULATION[mV]	*3	500max *5	600max	750max	500max *5	600max	750max
		*4	250max	480max	600max	250max	480max	600max
	RIPPLE[mVp-p] *6	-20 to +60°C	100max	100max	100max	100max	100max	100max
		-40 to -20°C	120max	120max	120max	120max	120max	120max
	RIPPLE NOISE[mVp-p] *6	-20 to +60°C	120max	120max	120max	120max	120max	120max
		-40 to -20°C	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	150max	180max	50max	150max	180max
-40 to -20°C	80max	240max	290max	80max	240max	290max		
DRIFT[mV] *7	50max	50max	60max	50max	50max	60max		
START-UP TIME[ms]	30max (Minimum input, Io=100%)							
OUTPUT VOLTAGE SETTING[V]*8	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically						
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)						
ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max						
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max						
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis						
	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis						
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1						
OTHERS	CASE SIZE/WEIGHT	25.4 X 9.9 X 25.4mm (W X H X D) / 20g max						
	COOLING METHOD	Convection/Forced air						

\*1 Single output +10V, +24V, +30V with no use of COM.  
 \*2 Rated input 12V, 24V or 48V DC Io=100%  
 \*3 Symmetrical loading from 5% to 100%.  
 \*4 Symmetrical loading from 20% to 100%.  
 \*5 Refer to the instruction manual 11.  
 \*6 Ripple and Ripple Noise is measured by using test board with in 50mm from output pin terminals.  
 \*7 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.  
 \*8 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25°C. Parallel operation with other model is not possible.



External view



- ※ Tolerance ±0.5
- ※ Dimensions in mm
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Mass 20g or less



\* Link to [www.cosel.co.jp/en](http://www.cosel.co.jp/en) for the latest product information.

- ① Series name
  - ② Single output
  - ③ Output wattage
  - ④ Input voltage
  - ⑤ Output voltage
  - ⑥ Optional
- G: Capacitor between Input and Output is removed.  
R: with Remote ON/OFF (Positive logic control)



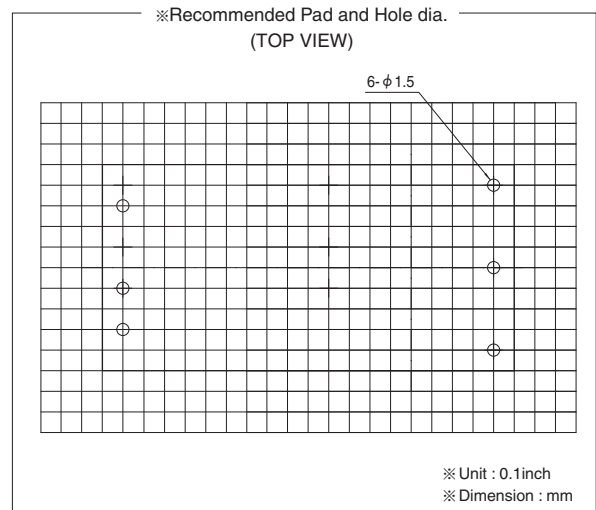
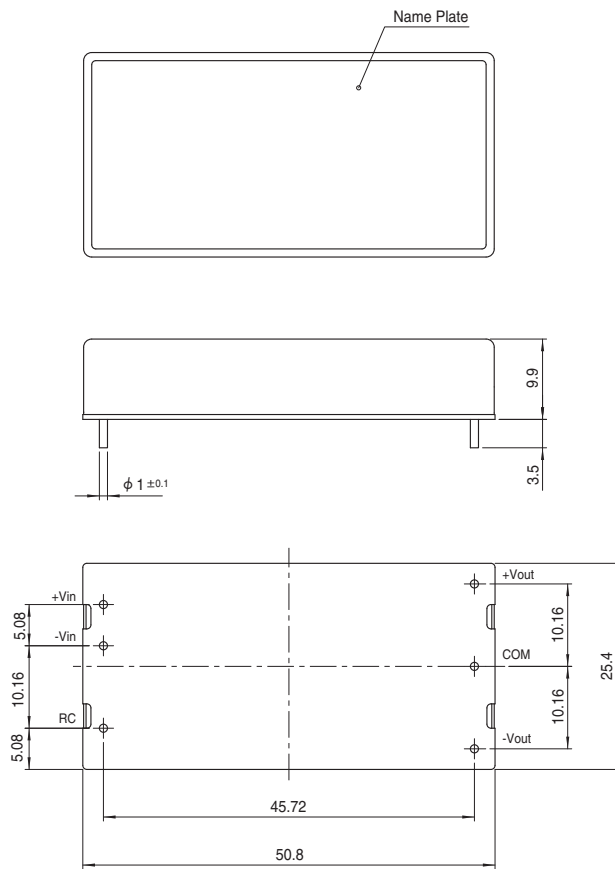
MODEL	MGFW302405	MGFW302412	MGFW302415	MGFW304805	MGFW304812	MGFW304815
MAX OUTPUT WATTAGE[W]	20	30	30	20	30	30
DC OUTPUT	VOLTAGE[V] *1	±5 or +10	±12 or +24	±15 or +30	±5 or +10	±12 or +24
	CURRENT[A]	2	1.25	1	2	1.25

## SPECIFICATIONS

	MODEL	MGFW302405	MGFW302412	MGFW302415	MGFW304805	MGFW304812	MGFW304815	
INPUT	VOLTAGE[V]	DC9 - 36			DC18 - 76			
	CURRENT[A] *2	0.98typ	1.44typ	1.44typ	0.49typ	0.72typ	0.72typ	
	EFFICIENCY[%] *2	85typ	87typ	87typ	85typ	87typ	87typ	
OUTPUT	VOLTAGE[V]	±5(+10)	±12(+24)	±15(+30)	±5(+10)	±12(+24)	±15(+30)	
	CURRENT[A]	2	1.25	1	2	1.25	1	
	LINE REGULATION[mV]	40max	60max	75max	40max	60max	75max	
	CROSS REGULATION[mV]	*3	500max *5	600max	750max	500max *5	600max	750max
		*4	250max	480max	600max	250max	480max	600max
	RIPPLE[mVp-p] *6	-20 to +60°C	100max	100max	100max	100max	100max	100max
		-40 to -20°C	120max	120max	120max	120max	120max	120max
	RIPPLE NOISE[mVp-p] *6	-20 to +60°C	120max	120max	120max	120max	120max	120max
		-40 to -20°C	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	150max	180max	50max	150max	180max
		-40 to -20°C	80max	240max	290max	80max	240max	290max
	DRIFT[mV] *7	50max	50max	60max	50max	50max	60max	
START-UP TIME[ms]	30max (Minimum input, Io=100%)							
OUTPUT VOLTAGE SETTING[V] *8	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically						
	OVERVOLTAGE PROTECTION[V]	Works over 120 to 160% of rating						
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)						
ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max						
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max						
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis						
	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis						
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1						
OTHERS	CASE SIZE/WEIGHT	25.4 X 9.9 X 50.8mm (W X H X D) / 40g max						
	COOLING METHOD	Convection/Forced air						

\*1 Single output +10V, +24V, +30V with no use of COM.  
 \*2 Rated input 12V, 24V or 48V DC Io=100%  
 \*3 Symmetrical loading from 5% to 100%.  
 \*4 Symmetrical loading from 20% to 100%.  
 \*5 Refer to the instruction manual 11.  
 \*6 Ripple and Ripple Noise is measured by using test board with in 50mm from output pin terminals.  
 \*7 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.  
 \*8 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25°C.  
 \* Parallel operation with other model is not possible.

External view



- ※ Tolerance ±0.5
- ※ Dimensions in mm
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Mass 40g or less

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The logo for COSEL, featuring the word "COSEL" in a bold, blue, sans-serif font. The letter 'O' is stylized with a blue arrow pointing to the right, integrated into its shape.