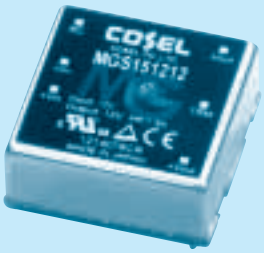
COSEL DC-DC Converters PCB Mount type

MGS15

Ordering information

MG	S	15	24	05	-□
①	②	③	④	⑤	⑧



①Series name
②Single output
③Output wattage
④Input voltage
⑤Output voltage
⑥Optional
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	15
	CURRENT[A]]	4	3	1.3	1	4	3	1.3	1

MG

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℃	75max	75max	100max	100max	75max	75max	100max	100max
		-40 to -20℃	100max	100max	120max	120max	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	-20 to +60℃	75max	75max	100max	100max	75max	75max	100max	100max
		-40 to -20℃	150max	150max	150max	150max	150max	150max	150max	150max
	TEMPERATURE REGULATION[mV]	-20 to +60℃	50max	50max	150max	180max	50max	50max	150max	180max
		-40 to +60℃	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		Fixed (TRM pin open) Available to adjust ±10% by external variable resister							
	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		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	15
	CURRENT[A]]	4	3	1.3	1

SPECIFICATIONS

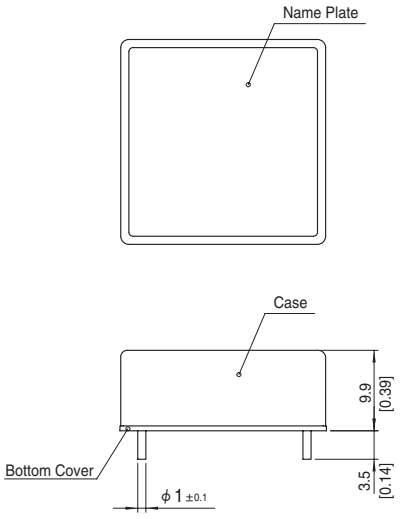
	MODEL		MGS15483R3	MGS154805	MGS154812	MGS154815
INPUT	VOLTAGE[V]		DC36 - 76			
	CURRENT[A]	*2	0.32typ	0.35typ	0.36typ	0.35typ
	EFFICIENCY[%]	*2	87typ	89typ	90typ	90typ
OUTPUT	VOLTAGE[V]		3.3	5	12	15
	CURRENT[A]		4	3	1.3	1
	LINE REGULATION[mV]		13.2max	20max	48max	60max
	LOAD REGULATION[mV]		13.2max	20max	48max	60max
	RIPPLE[mVp-p] *3	-20 to +60℃	75max	75max	100max	100max
		-40 to -20℃	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	-20 to +60℃	75max	75max	100max	100max
		-40 to -20℃	150max	150max	150max	150max
	TEMPERATURE REGULATION[mV]	-20 to +60℃	50max	50max	150max	180max
		-40 to +60℃	80max	80max	240max	290max
	DRIFT[mV]	*4	20max	20max	48max	60max
	START-UP TIME[ms]		30max (Minimum input, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE		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		Works over 105% of rating and recovers automatically			
	REMOTE ON/OFF		Provided (Negative logic L:ON, H:OFF)			

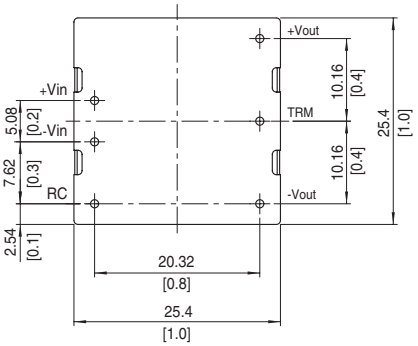
GENERAL SPECIFICATIONS

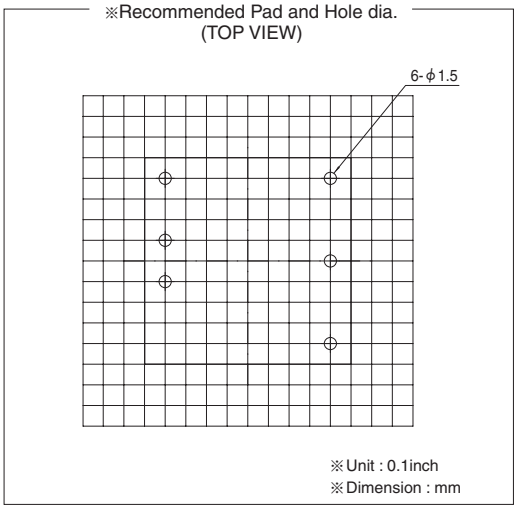
ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃)
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃)
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃)
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to +85℃, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +100℃, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 98.0m/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis
	IMPACT	490.3m/s² (50G), 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	25.4×9.9×25.4mm [1×0.39×1 inches] (W×H×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 Io=100%
*3 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22μF at 50mm from output pins. (20MHz Osilloscope)
*4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25℃.
*5 Rated input voltage (DC12V, DC24V, DC48V), rated output wattage, ambient temperature at 25℃.
* Parallel operation with other model is not possible.

External view







※ Tolerance ±0.5 [±0.02]
※ Dimensions in mm, [ ]=inches
※ Pin terminal material : Copper
※ Plating treatment of terminal : Lead free plating
※ Case material : Brass
※ Plating treatment of case : Nickel plating
※ Bottom Cover : FR4 (t=0.6) [t=0.024]
※ Please keep enough creepage distance with the pattern on PCB and other components.
※ Weight 20g max

COSEL DC-DC Converters PCB Mount type

MGS30

Ordering information

MG	S	30	24	05	-□
①	②	③	④	⑤	⑧

①Series name
②Single output
③Output wattage
④Input voltage
⑤Output voltage
⑧Optional
G: Capacitor between Input and Output is removed.
R: with Remote ON/OFF (Positive logic control)

RoHS

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	15
	CURRENT[A]]	8	6	2.5	2	8	6	2.5	2

SPECIFICATIONS

	MODEL		MGS30123R3	MGS301205	MGS301212	MGS301215	MGS30243R3	MGS302405	MGS302412	MGS302415
INPUT	VOLTAGE[V]		DC9 - 18				DC18 - 36			
	CURRENT[A]	*2	2.45typ	2.75typ	2.78typ	2.78typ	1.21typ	1.36typ	1.36typ	1.36typ
	EFFICIENCY[%]	*2	90typ	91typ	90typ	90typ	91typ	92typ	92typ	92typ
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] *3	-20 to +60℃	75max	75max	100max	100max	75max	75max	100max	100max
		-40 to -20℃	100max	100max	120max	120max	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	-20 to +60℃	75max	75max	100max	100max	75max	75max	100max	100max
		-40 to -20℃	150max	150max	150max	150max	150max	150max	150max	150max
	TEMPERATURE REGULATION[mV]	-20 to +60℃	50max	50max	150max	180max	50max	50max	150max	180max
		-40 to +60℃	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		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		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	15
	CURRENT[A]]	8	6	2.5	2

SPECIFICATIONS

	MODEL		MGS30483R3	MGS304805	MGS304812	MGS304815
INPUT	VOLTAGE[V]		DC36 - 76			
	CURRENT[A]	*2	0.61typ	0.68typ	0.68typ	0.68typ
	EFFICIENCY[%]	*2	91typ	92typ	92typ	92typ
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] *3	-20 to +60℃	75max	75max	100max	100max
		-40 to -20℃	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	-20 to +60℃	75max	75max	100max	100max
		-40 to -20℃	150max	150max	150max	150max
	TEMPERATURE REGULATION[mV]	-20 to +60℃	50max	50max	150max	180max
		-40 to +60℃	80max	80max	240max	290max
	DRIFT[mV]	*4	20max	20max	48max	60max
	START-UP TIME[ms]		30max (Minimum input, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE		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		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℃)
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃)
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃)
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to +85℃, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +100℃, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 98.0m/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis
	IMPACT	490.3m/s² (50G), 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	25.4×9.9×50.8mm [1×0.39×2 inches] (W×H×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 Io=100%
*3 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22μF at 50mm from output pins. (20MHz Osilloscope)
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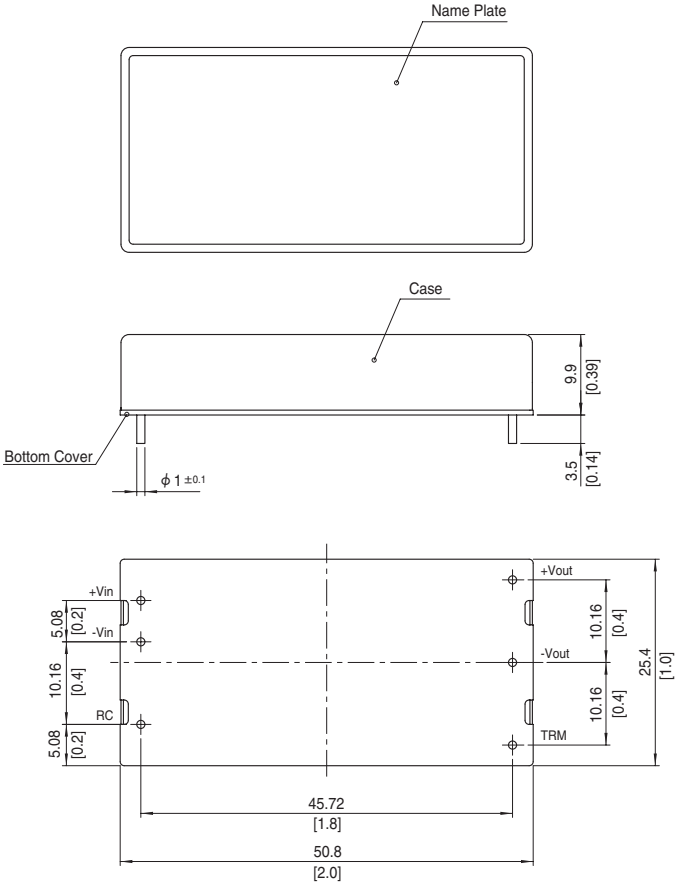
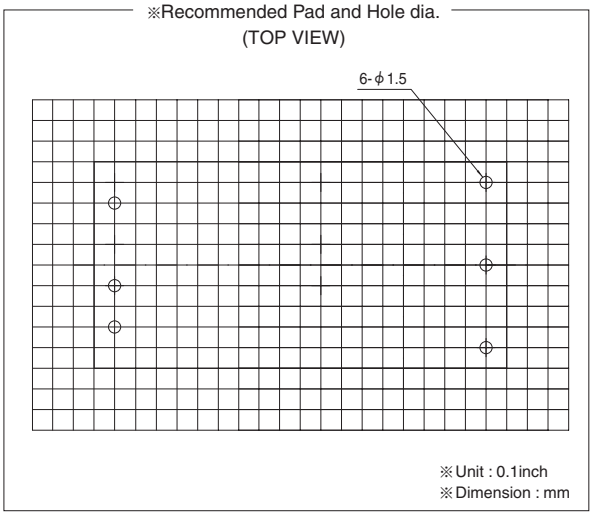
External view





※ Tolerance ±0.5 [±0.02]
※ Dimensions in mm, [ ]=inches
※ Pin terminal material : Copper
※ Plating treatment of terminal : Lead free plating
※ Case material : Brass
※ Plating treatment of case : Nickel plating
※ Bottom Cover : FR4 (t=0.6) [t=0.024]
※ Please keep enough creepage distance with the pattern on PCB and other components.
※ Weight 40g max