

On-board type



COSEL

MG-series



Feature

- Industrial standard 1"X1" (MG15), 1"X2" (MG30)
- Wide input range DC9-36V/DC18-76V (MGFS/MGFW)
- High efficiency by synchronized rectification circuit (MGS15/MGFS15/MGS30/MGFS30)
- 6 sided shield
- I/O Isolation voltage DC1,500V (1minute)
- Built-in overcurrent protection circuits (recovers automatically)
- Built-in overvoltage protection circuits (MG30)
- Built-in remote ON/OFF
- Output voltage adjustability by external variable resistor
- High reliability : not built-in aluminum and tantalum electrolytic capacitor

MG

CE marking

Low Voltage Directive

Safety agency approvals

UL60950-1, C-UL, EN60950-1

10-year warranty (Refer to the instruction manual 12)



* Link to 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

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	0.70typ
	EFFICIENCY[%] *2	86typ	87typ	87typ	88typ	87typ	89typ	89typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	4	3	1.3	1	4	3	1
	LINE REGULATION[mV]	13.2max	20max	48max	60max	13.2max	20max	48max
	LOAD REGULATION[mV]	13.2max	20max	48max	60max	13.2max	20max	60max
	RIPPLE[mVp-p] *3	-20 to +60°C	75max	75max	100max	100max	75max	75max
		-40 to -20°C	100max	100max	120max	120max	100max	100max
	RIPPLE NOISE[mVp-p] *3	-20 to +60°C	100max	100max	120max	120max	100max	100max
		-40 to -20°C	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV] *3	-20 to +60°C	50max	50max	150max	180max	50max	50max
		-40 to -20°C	80max	80max	240max	290max	80max	80max
	DRIFT[mV] *4	20max	20max	48max	60max	20max	20max	48max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)						
PROTECTION CIRCUIT AND OTHERS	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed (TRM pin open) Available to adjust $\pm 10\%$ 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
	OVERCURRENT PROTECTION[V]	Works over 105% of rating and recovers automatically						
PROTECTION CIRCUIT AND OTHERS	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

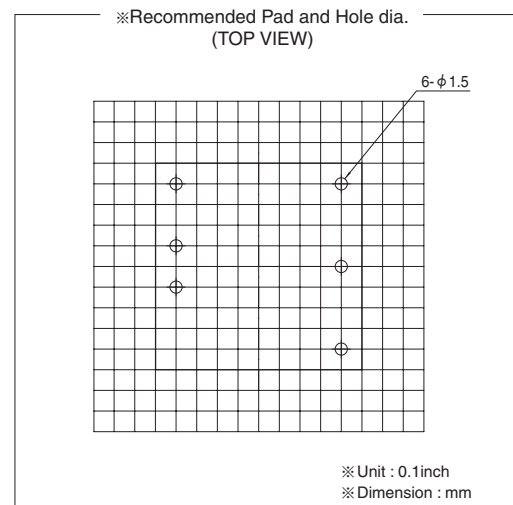
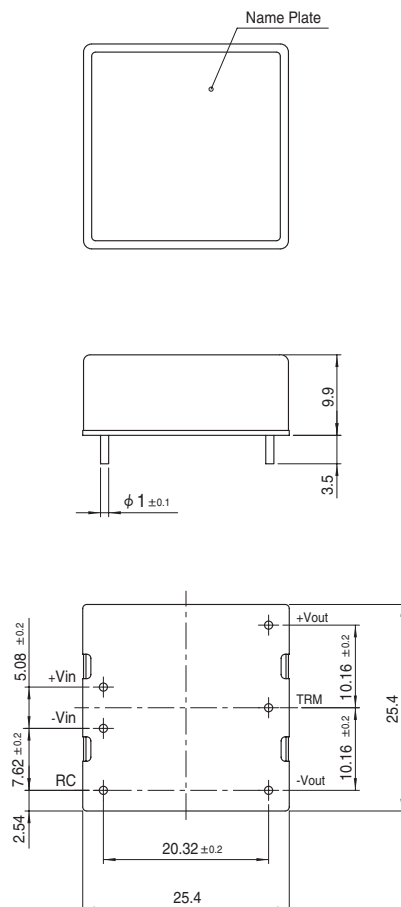
MODEL	MGS15483R3	MGS154805	MGS154812	MGS154815
INPUT	VOLTAGE[V]	DC36 - 76		
	CURRENT[A] *2	0.32typ	0.35typ	0.36typ
	EFFICIENCY[%] *2	87typ	89typ	90typ
OUTPUT	VOLTAGE[V]	3.3	5	12
	CURRENT[A]	4	3	1.3
	LINE REGULATION[mV]	13.2max	20max	48max
	LOAD REGULATION[mV]	13.2max	20max	48max
	RIPPLE[mVp-p] *3	-20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

GENERAL SPECIFICATIONS

ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000M Ω min (20 $\pm$ 15 $^{\circ}$ C)
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000M Ω min (20 $\pm$ 15 $^{\circ}$ C)
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000M Ω min (20 $\pm$ 15 $^{\circ}$ C)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85 $^{\circ}$ C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100 $^{\circ}$ C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 98.0m/s 2 (10G), 3minutes period, 60minutes each along X, Y and Z axis
	IMPACT	490.3m/s 2 (50G), 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	25.4X9.9X25.4mm (WXHxD) / 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 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 $^{\circ}$ C.
- *5 Rated input voltage (DC12V, DC24V, DC48V), rated output wattage, ambient temperature at 25 $^{\circ}$ 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