

MGS1R5

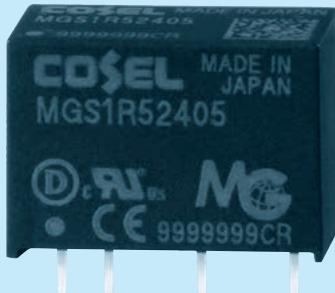
Ordering information

MG S 1R5 24 05 -□

① ② ③ ④ ⑤ ⑥ ⑦ ⑧



RoHS



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- Y2: Output voltage
adjustable (+10%, -5%)

MODEL	MGS1R5053R3	MGS1R50505	MGS1R50512	MGS1R50515	MGS1R5123R3	MGS1R51205	MGS1R51212	MGS1R51215
MAX OUTPUT WATTAGE[W]	1.32	1.50	1.56	1.50	1.32	1.50	1.56	1.50
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	0.4	0.3	0.13	0.1	0.4	0.3	0.1

SPECIFICATIONS

	MODEL	MGS1R5053R3	MGS1R50505	MGS1R50512	MGS1R50515	MGS1R5123R3	MGS1R51205	MGS1R51212	MGS1R51215
INPUT	VOLTAGE[V]	DC4.5 - 9 (Surge voltage 12.5V, 100ms max)		DC9 - 18 (Surge voltage 25V, 100ms max)					
	CURRENT[A]	*1 0.33typ	0.37typ	0.37typ	0.36typ	0.14typ	0.15typ	0.16typ	0.15typ
	EFFICIENCY[%]	*1 80typ	82typ	85typ	84typ	80typ	83typ	84typ	84typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	0.4	0.3	0.13	0.1	0.4	0.3	0.13	0.1
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	*2 120max	120max	150max	150max	120max	120max	150max	150max
	RIPPLE NOISE[mVp-p]	*2 200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +85°C 50max	50max	150max	180max	50max	50max	150max	180max
	DRIFT[mV]	*3 -40 to +85°C 80max	80max	240max	290max	80max	80max	240max	290max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)							
	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45
PROTECTION CIRCUIT	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
	MODEL	MGS1R5243R3	MGS1R52405	MGS1R52412	MGS1R52415	MGS1R5483R3	MGS1R54805	MGS1R54812	MGS1R54815
INPUT	MAX OUTPUT WATTAGE[W]	1.32	1.50	1.56	1.50	1.32	1.50	1.56	1.50
	DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
		CURRENT[A]	0.4	0.3	0.13	0.1	0.4	0.3	0.1

SPECIFICATIONS

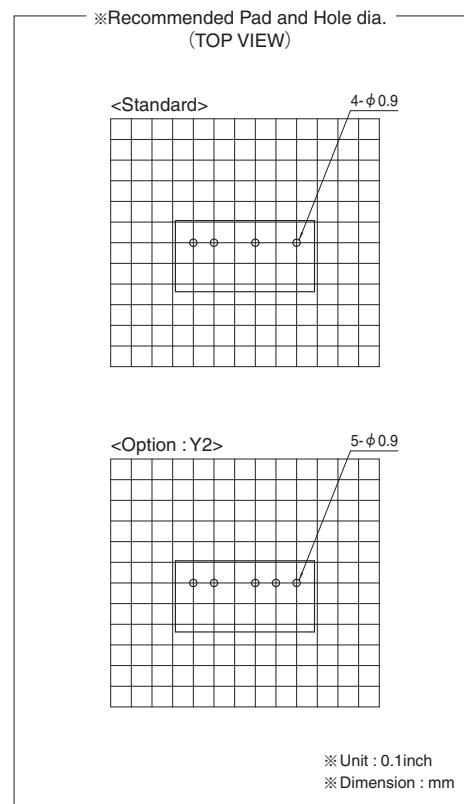
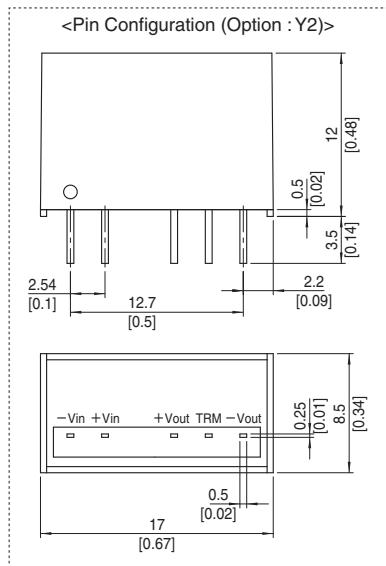
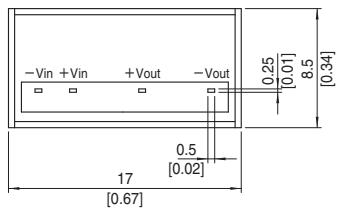
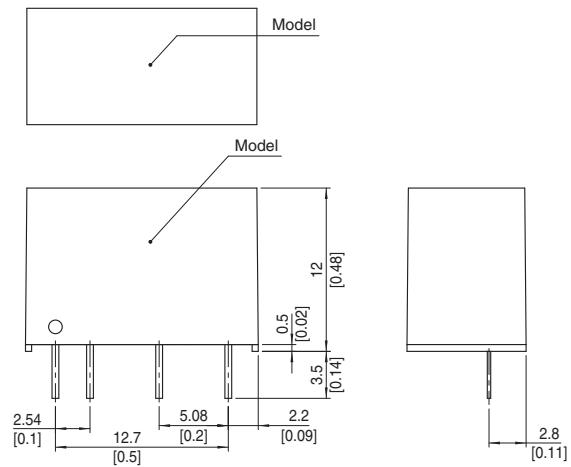
	MODEL	MGS1R5243R3	MGS1R52405	MGS1R52412	MGS1R52415	MGS1R5483R3	MGS1R54805	MGS1R54812	MGS1R54815
INPUT	VOLTAGE[V]	DC18 - 36 (Surge voltage 50V, 100ms max)		DC36 - 76 (Surge voltage 100V, 100ms max)					
	CURRENT[A]	*1 0.071typ	0.079typ	0.080typ	0.077typ	0.036typ	0.040typ	0.040typ	0.039typ
	EFFICIENCY[%]	*1 78typ	80typ	82typ	82typ	77typ	80typ	82typ	82typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	0.4	0.3	0.13	0.1	0.4	0.3	0.13	0.1
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	*2 120max	120max	150max	150max	120max	120max	150max	150max
	RIPPLE NOISE[mVp-p]	*2 200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +85°C 50max	50max	150max	180max	50max	50max	150max	180max
	DRIFT[mV]	*3 -40 to +85°C 80max	80max	240max	290max	80max	80max	240max	290max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)							
	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45
PROTECTION CIRCUIT	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							

GENERAL SPECIFICATIONS

ISOLATION	INPUT-OUTPUT	DC1,500V or AC1,000V 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), 5,000m (16,400feet) 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 ² (10G), 3minute 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	17.0×12.0×8.5mm [0.67×0.48×0.34 inches] (W×H×D) / 4g max
	COOLING METHOD	Convection/Forced air

- *1 Rated input 5V, 12V, 24V or 48V DC Io=100%
- *2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.
- *3 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- * Parallel operation with other model is not possible.
- * MGW1R5xx12/MGW1R5xx15 is available as single output, +24V/+30V

External view



※ Tolerance ±0.5 [± 0.02]
※ Dimensions in mm, [] = inches
※ Pin terminal material : Copper
※ Planting treatment of terminal : Lead free plating
※ Case material : PBT
※ Weight 4g max

MGS3

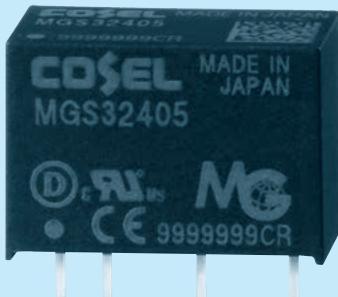
Ordering information

MG S 3 24 05 -□

(1) (2) (3) (4) (5) (6)



RoHS



- (1) Series name
- (2) Single output
- (3) Output wattage
- (4) Input voltage
- (5) Output voltage
- (6) Optional
Y2: Output voltage
adjustable (+10%, -5%)

MODEL	MGS3053R3	MGS30505	MGS30512	MGS30515	MGS3123R3	MGS31205	MGS31212	MGS31215
MAX OUTPUT WATTAGE[W]	2.64	3.0	3.0	3.0	2.64	3.0	3.0	3.0
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	0.8	0.6	0.25	0.2	0.8	0.6	0.2

SPECIFICATIONS

INPUT	MODEL	MGS3053R3	MGS30505	MGS30512	MGS30515	MGS3123R3	MGS31205	MGS31212	MGS31215	
	VOLTAGE[V]	DC4.5 - 9 (Surge voltage 12.5V, 100ms max)				DC9 - 18 (Surge voltage 25V, 100ms max)				
INPUT	CURRENT[A]	*1 0.67typ	0.73typ	0.71typ	0.71typ	0.28typ	0.30typ	0.29typ	0.30typ	
	EFFICIENCY[%]	*1 79typ	82typ	85typ	85typ	80typ	83typ	86typ	85typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15	
	CURRENT[A]	0.8	0.6	0.25	0.2	0.8	0.6	0.25	0.2	
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max	
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max	
	RIPPLE[mVp-p]	*2 120max	120max	150max	150max	120max	120max	150max	150max	
	RIPPLE NOISE[mVp-p]	*2 200max	200max	200max	200max	200max	200max	200max	200max	
	TEMPERATURE	-20 to +75°C	50max	50max	150max	180max	50max	50max	150max	180max
	REGULATION[mV]	-40 to +75°C	80max	80max	240max	290max	80max	80max	240max	290max
	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max	60max	
	START-UP TIME[ms]		30max (Minimum input, Io=100%)							
PROTECTION CIRCUIT	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically								

INPUT	MODEL	MGS3243R3	MGS32405	MGS32412	MGS32415	MGS3483R3	MGS34805	MGS34812	MGS34815
	MAX OUTPUT WATTAGE[W]	2.64	3.0	3.0	3.0	2.64	3.0	3.0	3.0
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	0.8	0.6	0.25	0.2	0.8	0.6	0.25	0.2

SPECIFICATIONS

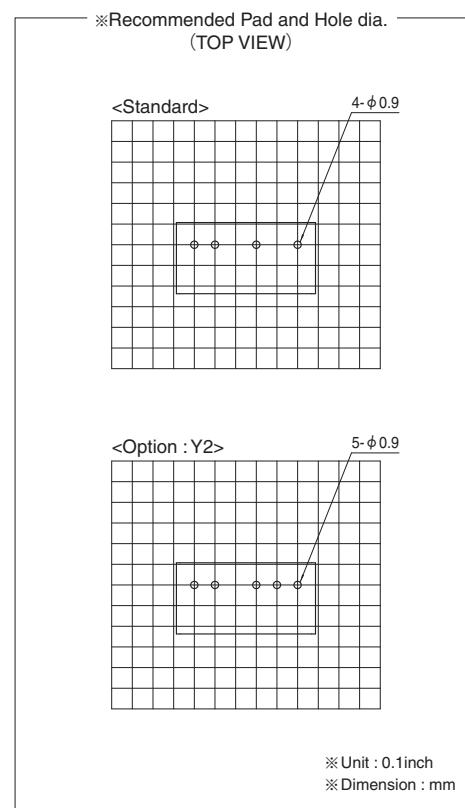
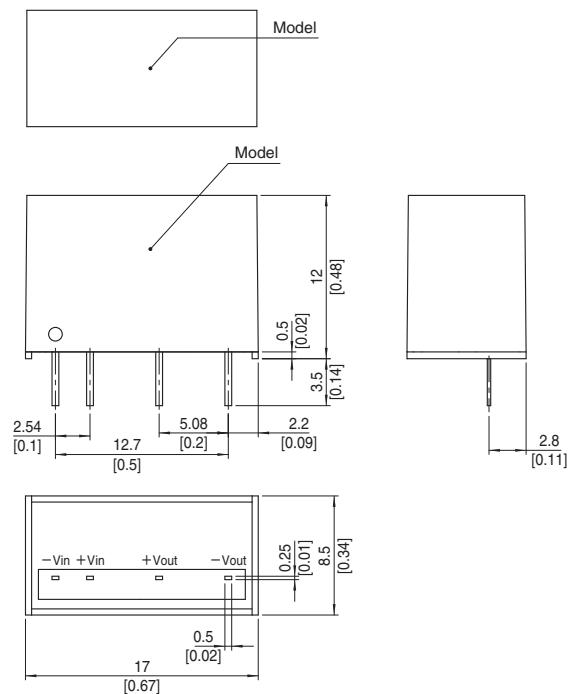
INPUT	MODEL	MGS3243R3	MGS32405	MGS32412	MGS32415	MGS3483R3	MGS34805	MGS34812	MGS34815	
	VOLTAGE[V]	DC18 - 36 (Surge voltage 50V, 100ms max)				DC36 - 76 (Surge voltage 100V, 100ms max)				
INPUT	CURRENT[A]	*1 0.14typ	0.15typ	0.15typ	0.15typ	0.071typ	0.079typ	0.074typ	0.074typ	
	EFFICIENCY[%]	*1 80typ	82typ	85typ	85typ	78typ	80typ	85typ	85typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15	
	CURRENT[A]	0.8	0.6	0.25	0.2	0.8	0.6	0.25	0.2	
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max	
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max	
	RIPPLE[mVp-p]	*2 120max	120max	150max	150max	120max	120max	150max	150max	
	RIPPLE NOISE[mVp-p]	*2 200max	200max	200max	200max	200max	200max	200max	200max	
	TEMPERATURE	-20 to +75°C	50max	50max	150max	180max	50max	50max	150max	180max
	REGULATION[mV]	-40 to +75°C	80max	80max	240max	290max	80max	80max	240max	290max
	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max	60max	
	START-UP TIME[ms]		30max (Minimum input, Io=100%)							
PROTECTION CIRCUIT	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically								

GENERAL SPECIFICATIONS

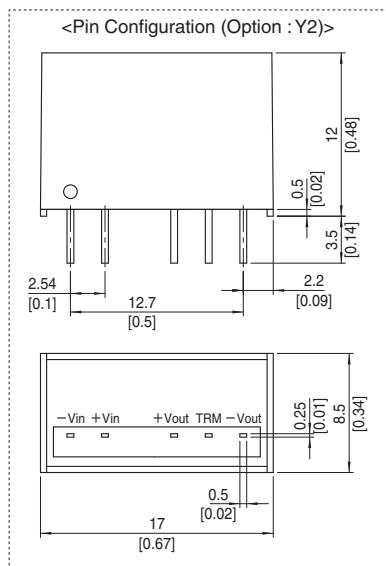
ISOLATION	INPUT-OUTPUT	DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15°C)
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +100°C, 20 to d95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz 98.0m/s² (10G), 3minute 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	17.0×12.0×8.5mm [0.67×0.48×0.34 inches] (W×H×D) / 4g max
	COOLING METHOD	Convection/Forced air

- *1 Rated input 5V, 12V, 24V or 48V DC Io=100%
- *2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.
- *3 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- * Parallel operation with other model is not possible.
- * MGW3xx12/MGW3xx15 is available as single output, +24V/+30V

External view



※ Tolerance ±0.5 [±0.02]
※ Dimensions in mm, []= inches
※ Pin terminal material : Copper
※ Planting treatment of terminal : Lead free plating
※ Case material : PBT
※ Weight 4g max



MGS6

Ordering information

MG S 6 24 05 -□

① ② ③ ④ ⑤ ⑥



RoHS



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
Y2: Output voltage
adjustable (+10%, -5%)

MODEL	MGS6053R3	MGS60505	MGS60512	MGS60515	MGS6123R3	MGS61205	MGS61212	MGS61215
MAX OUTPUT WATTAGE[W]	5.28	6.0	6.0	6.0	5.28	6.0	6.0	6.0
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	1.6	1.2	0.5	0.4	1.6	1.2	15

SPECIFICATIONS

MODEL	MGS6053R3	MGS60505	MGS60512	MGS60515	MGS6123R3	MGS61205	MGS61212	MGS61215
INPUT	VOLTAGE[V]	DC4.5 - 9 (Surge voltage 12.5V, 100ms max)			DC9 - 18 (Surge voltage 25V, 100ms max)			
	CURRENT[A]	*1 1.31typ	1.42typ	1.37typ	1.37typ	0.54typ	0.59typ	0.57typ
	EFFICIENCY[%]	*1 81typ	85typ	88typ	88typ	82typ	85typ	89typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	1.6	1.2	0.5	0.4	1.6	1.2	0.5
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	60max
	RIPPLE[mVp-p]	Io=30% - 75max	75max	100max	100max	75max	75max	100max
		*2 Io=0 - 30% 225max	225max	300max	300max	225max	225max	300max
	RIPPLE NOISE[mVp-p]	Io=30% - 120max	120max	150max	150max	120max	120max	150max
		*2 Io=0 - 30% 300max	300max	400max	400max	300max	300max	400max
	TEMPERATURE	-20 to +70°C	50max	50max	150max	180max	50max	50max
	REGULATION[mV]	-40 to +70°C	80max	80max	240max	290max	80max	240max
	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)						
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	MGS6243R3	MGS62405	MGS62412	MGS62415	MGS6483R3	MGS64805	MGS64812	MGS64815
MAX OUTPUT WATTAGE[W]	5.28	6.0	6.0	6.0	5.28	6.0	6.0	6.0
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	1.6	1.2	0.5	0.4	1.6	1.2	15

SPECIFICATIONS

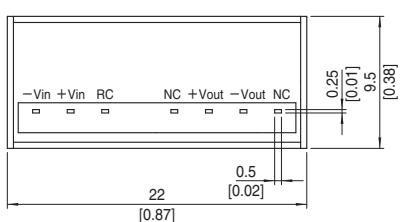
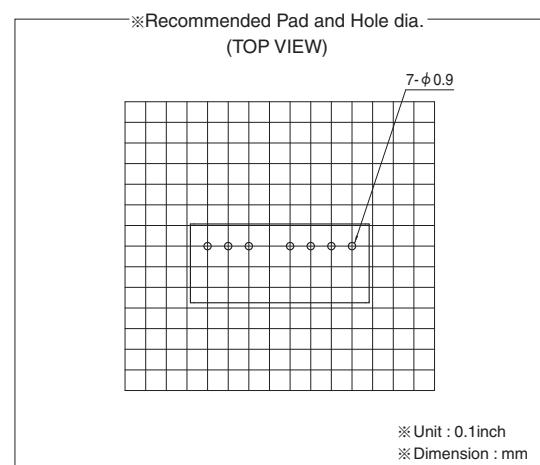
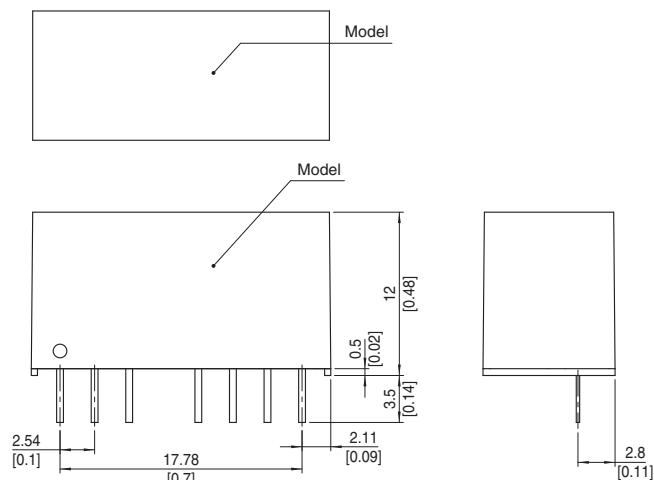
MODEL	MGS6243R3	MGS62405	MGS62412	MGS62415	MGS6483R3	MGS64805	MGS64812	MGS64815
INPUT	VOLTAGE[V]	DC18 - 36 (Surge voltage 50V, 100ms max)			DC36 - 76 (Surge voltage 100V, 100ms max)			
	CURRENT[A]	*1 0.27typ	0.30typ	0.29typ	0.29typ	0.14typ	0.15typ	0.15typ
	EFFICIENCY[%]	*1 82typ	85typ	89typ	89typ	81typ	85typ	89typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	1.6	1.2	0.5	0.4	1.6	1.2	0.5
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	60max
	RIPPLE[mVp-p]	Io=30% - 75max	75max	100max	100max	75max	75max	100max
		*2 Io=0 - 30% 225max	225max	300max	300max	225max	225max	300max
	RIPPLE NOISE[mVp-p]	Io=30% - 120max	120max	150max	150max	120max	120max	150max
		*2 Io=0 - 30% 300max	300max	400max	400max	300max	300max	400max
	TEMPERATURE	-20 to +70°C	50max	50max	150max	180max	50max	50max
	REGULATION[mV]	-40 to +70°C	80max	80max	240max	290max	80max	240max
	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)						
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

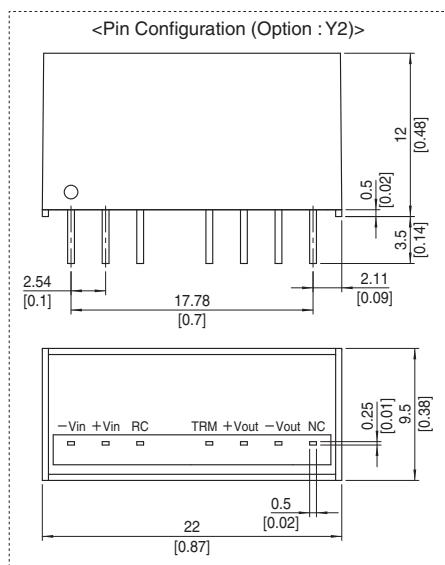
ISOLATION	INPUT-OUTPUT	DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min ($20\pm15^{\circ}\text{C}$)
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to $+85^{\circ}\text{C}$, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to $+100^{\circ}\text{C}$, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz 98.0m/s ² (10G), 3minute 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	22.0 X 12.0 X 9.5mm [0.87 X 0.48 X 0.38 inches] (W X H X D) / 7g max
	COOLING METHOD	Convection/Forced air

- *1 Rated input 5V, 12V, 24V or 48V DC I_o=100%
- *2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.
- *3 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C .
- * Parallel operation with other model is not possible.
- * MGW6xx12/MGW6xx15 is available as single output, +24V/+30V

External view



- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, [] = inches
- ※ Pin terminal material : Copper
- ※ Planting treatment of terminal : Lead free plating
- ※ Case material : PBT
- ※ Weight 7g max



MGS10

Ordering information

MG S 10 24 05 -□

① ② ③ ④ ⑤ ⑥ ⑦ ⑧



RoHS



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- Y2: Output voltage adjustable (+10%, -5%)

MODEL	MGS10053R3	MGS100505	MGS100512	MGS100515	MGS10123R3	MGS101205	MGS101212	MGS101215
MAX OUTPUT WATTAGE[W]	8.58	10.0	10.8	10.5	8.58	10.0	10.8	10.5
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	2.6	2.0	0.9	0.7	2.6	2.0	0.9

SPECIFICATIONS

INPUT	MODEL	MGS10053R3	MGS100505	MGS100512	MGS100515	MGS10123R3	MGS101205	MGS101212	MGS101215
	VOLTAGE[V]	DC4.5 - 9 (Surge voltage 12.5V, 100ms max)				DC9 - 18 (Surge voltage 25V, 100ms max)			
INPUT	CURRENT[A]	*1 2.02typ	2.30typ	2.46typ	2.39typ	0.83typ	0.94typ	1.02typ	0.99typ
	EFFICIENCY[%]	*1 85typ	87typ	88typ	88typ	87typ	89typ	89typ	89typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	2.6	2.0	0.9	0.7	2.6	2.0	0.9	0.7
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	Io=30% - 75max	75max	100max	100max	75max	75max	100max	100max
		*2 Io=0 - 30% 225max	225max	300max	300max	225max	225max	300max	300max
	RIPPLE NOISE[mVp-p]	Io=30% - 120max	120max	150max	150max	120max	120max	150max	150max
		*2 Io=0 - 30% 300max	300max	400max	400max	300max	300max	400max	400max
	TEMPERATURE	-20 to +50°C	50max	50max	150max	180max	50max	50max	150max
	REGULATION[mV]	-40 to +50°C	80max	80max	240max	290max	80max	80max	240max
	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)							
PROTECTION CIRCUIT AND OTHERS	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)							

MODEL	MGS10243R3	MGS102405	MGS102412	MGS102415	MGS10483R3	MGS104805	MGS104812	MGS104815
MAX OUTPUT WATTAGE[W]	8.58	10.0	10.8	10.5	8.58	10.0	10.8	10.5
DC OUTPUT	VOLTAGE[V]	*1 3.3	5	12	15	3.3	5	12
	CURRENT[A]	2.6	2.0	0.9	0.7	2.6	2.0	0.9

SPECIFICATIONS

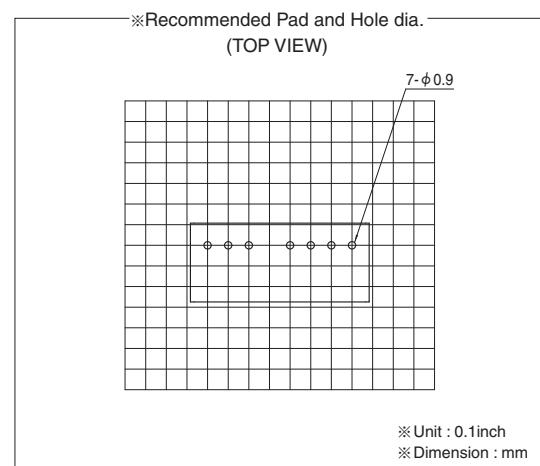
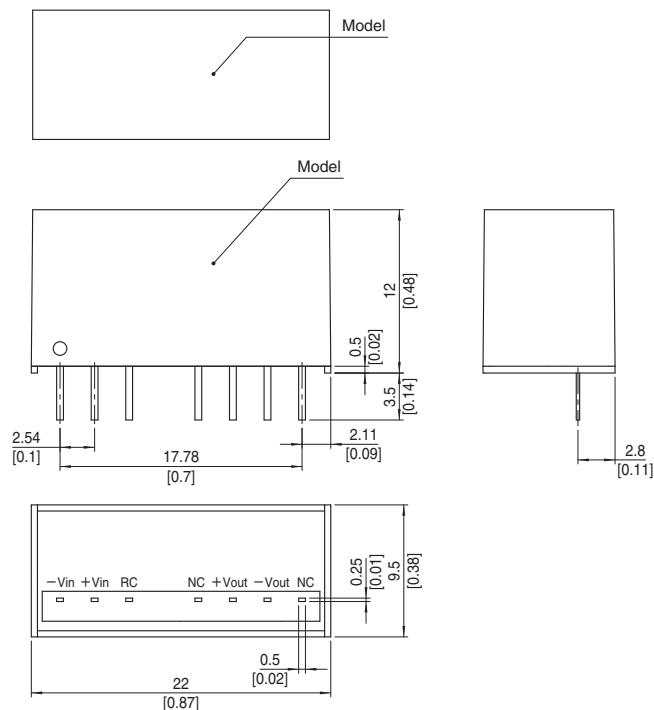
INPUT	MODEL	MGS10243R3	MGS102405	MGS102412	MGS102415	MGS10483R3	MGS104805	MGS104812	MGS104815
	VOLTAGE[V]	DC18 - 36 (Surge voltage 50V, 100ms max)				DC36 - 76 (Surge voltage 100V, 100ms max)			
INPUT	CURRENT[A]	*1 0.42typ	0.47typ	0.50typ	0.49typ	0.21typ	0.24typ	0.25typ	0.25typ
	EFFICIENCY[%]	*1 87typ	89typ	90typ	90typ	87typ	89typ	90typ	90typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	2.6	2.0	0.9	0.7	2.6	2.0	0.9	0.7
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	Io=30% - 75max	75max	100max	100max	75max	75max	100max	100max
		*2 Io=0 - 30% 225max	225max	300max	300max	225max	225max	300max	300max
	RIPPLE NOISE[mVp-p]	Io=30% - 120max	120max	150max	150max	120max	120max	150max	150max
		*2 Io=0 - 30% 300max	300max	400max	400max	300max	300max	400max	400max
	TEMPERATURE	-20 to +50°C	50max	50max	150max	180max	50max	50max	150max
	REGULATION[mV]	-40 to +50°C	80max	80max	240max	290max	80max	80max	240max
	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)							
PROTECTION CIRCUIT AND OTHERS	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)							

GENERAL SPECIFICATIONS

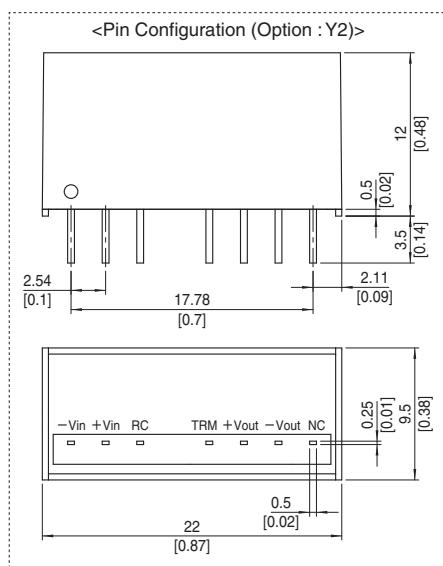
ISOLATION	INPUT-OUTPUT	DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15°C)
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz 98.0m/s² (10G), 3minute 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	22.0×12.0×9.5mm [0.87×0.48×0.38 inches] (W×H×D) / 7g max
	COOLING METHOD	Convection/Forced air

- *1 Rated input 5V, 12V, 24V or 48V DC Io=100%
- *2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.
- *3 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- * Parallel operation with other model is not possible.
- * MGW10xx12/MGW10xx15 is available as single output, +24V/+30V

External view



※ Tolerance ±0.5 [±0.02]
※ Dimensions in mm, [] = inches
※ Pin terminal material : Copper
※ Plating treatment of terminal : Lead free plating
※ Case material : PBT
※ Weight 7g max



MGS15

Ordering information

MG S 15 24 05 -□

(1) (2) (3) (4) (5) (6)



RoHS



- (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

INPUT	MODEL	MGS15123R3	MGS151205	MGS151212	MGS151215	MGS15243R3	MGS152405	MGS152412	MGS152415	
	VOLTAGE[V]	DC9 - 18				DC18 - 36				
INPUT	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]	-20 to +60°C *3 -40 to -20°C	75max 100max	75max 100max	100max 120max	100max 120max	75max 100max	75max 100max	100max 120max	100max 120max
	RIPPLE NOISE[mVp-p]	-20 to +60°C *3 -40 to -20°C	75max 150max	75max 150max	100max 150max	100max 150max	75max 150max	75max 150max	100max 150max	100max 150max
	TEMPERATURE REGULATION[mV]	-20 to +60°C -40 to +60°C	50max 80max	50max 80max	150max 240max	180max 290max	50max 80max	50max 80max	150max 240max	180max 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 resistor						
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
	CURRENT[A]	4	3	1.3

SPECIFICATIONS

INPUT	MODEL	MGS15483R3	MGS154805	MGS154812	MGS154815	
	VOLTAGE[V]	DC36 - 76				
INPUT	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]	-20 to +60°C *3 -40 to -20°C	75max 100max	75max 100max	100max 120max	100max 120max
	RIPPLE NOISE[mVp-p]	-20 to +60°C *3 -40 to -20°C	75max 150max	75max 150max	100max 150max	100max 150max
	TEMPERATURE REGULATION[mV]	-20 to +60°C -40 to +60°C	50max 80max	50max 80max	150max 240max	180max 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		
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

	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
ISOLATION	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/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%

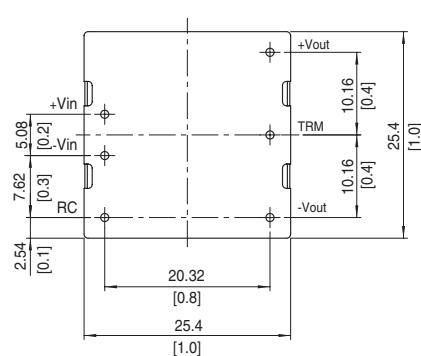
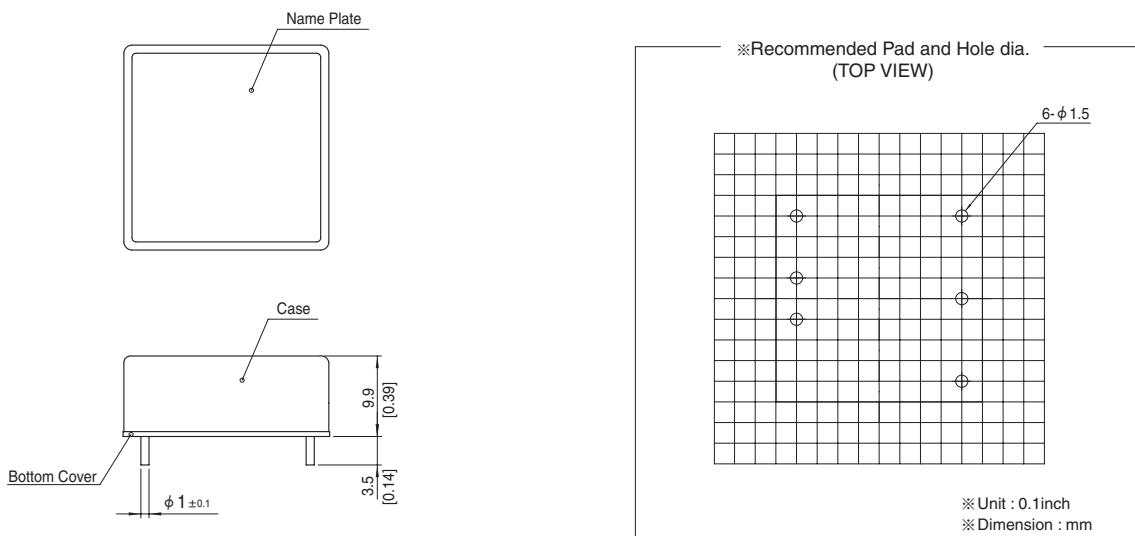
*3 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22μF at 50mm from output pins. (20MHz Oscilloscope)

*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 [± 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

MGS30

Ordering information

MG S 30 24 05 -□

(1) (2) (3) (4) (5) (6)



RoHS



- (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	2.45typ	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]	-20 to +60°C *3 -40 to -20°C	75max 100max	75max 100max	100max 120max	100max 120max	75max 100max	100max 120max	100max 120max	
	RIPPLE NOISE[mVp-p]	-20 to +60°C *3 -40 to -20°C	75max 150max	75max 150max	100max 150max	100max 150max	75max 150max	100max 150max	100max 150max	
	TEMPERATURE REGULATION[mV]	-20 to +60°C -40 to +60°C	50max 80max	50max 80max	150max 240max	180max 290max	50max 80max	150max 240max	180max 290max	
	DRIFT[mV]	*4	20max	20max	48max	60max	20max	20max	48max	
	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		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	0.68typ	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]	-20 to +60°C *3 -40 to -20°C	75max 100max	75max 120max	100max 120max
	RIPPLE NOISE[mVp-p]	-20 to +60°C *3 -40 to -20°C	75max 150max	75max 150max	100max 150max
	TEMPERATURE REGULATION[mV]	-20 to +60°C -40 to +60°C	50max 80max	50max 80max	150max 240max
	DRIFT[mV]	*4	20max	20max	48max
	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
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically		
	OVERVOLTAGE PROTECTION		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/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%

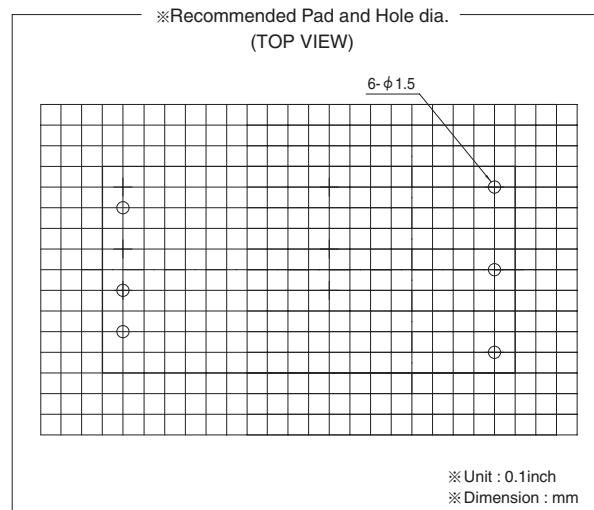
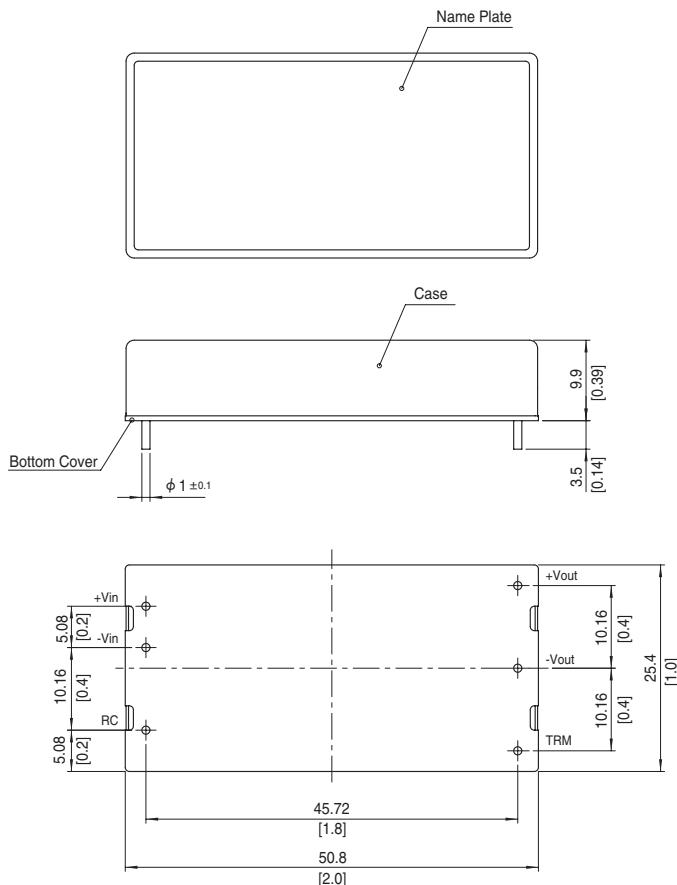
*3 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22μF at 50mm from output pins. (20MHz Oscilloscope)

*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 [± 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

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