COSEL
DC-DC Converters PCB Mount Type
MGS1R5

c**UL**us Ⓓ CE

RoHS

eco

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	15
	CURRENT[A]	0.4	0.3	0.13	0.1	0.4	0.3	0.13	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℃	50max	50max	150max	180max	50max	50max	150max	180max
	-40 to +85℃	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%)							
	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
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	15
	CURRENT[A]	0.4	0.3	0.13	0.1	0.4	0.3	0.13	0.1

SPECIFICATIONS

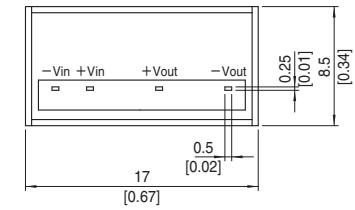|	MODEL	MGS1R5243R3	MGS1R52405	MGS1R52412	MGS1R52415	MGS1R5483R3	MGS1R54805	MGS1R54812	MGS1R54815
INPUT	**VOLTAGE[V]**	DC18 - 36 (Surge voltage 50V, 100ms max)				DC36 - 76 (Surge voltage 100V, 100ms max)			
	CURRENT[A] *1	0.071typ	0.079typ	0.080typ	0.077typ	0.036typ	0.040typ	0.040typ	0.039typ
	EFFICIENCY[%] *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℃	50max	50max	150max	180max	50max	50max	150max	180max
	-40 to +85℃	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%)							
	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℃)
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to +85℃, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) 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), 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℃.
＊ Parallel operation with other model is not possible.
＊ MGW1R5xx12/MGW1R5xx15 is available as single output, +24V/+30V

External view

※Recommended Pad and Hole dia.
（TOP VIEW）

<Standard>   4-φ0.9

<Option : Y2>   5-φ0.9

※Unit : 0.1inch
※Dimension : mm
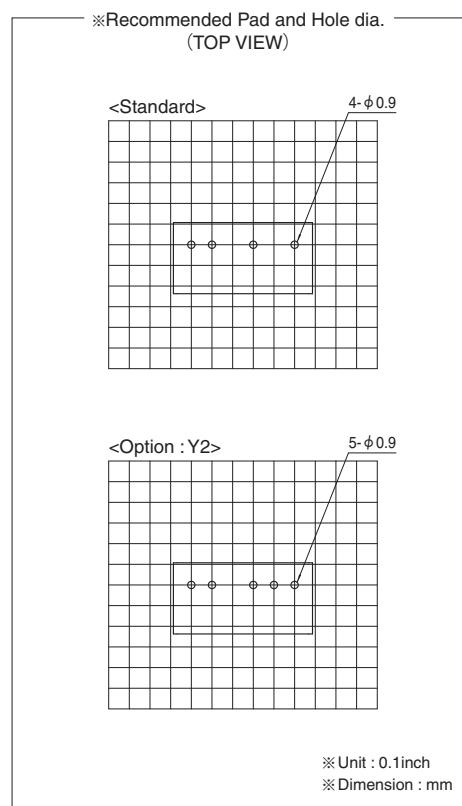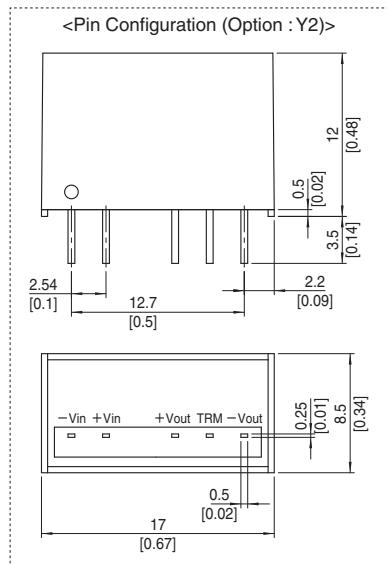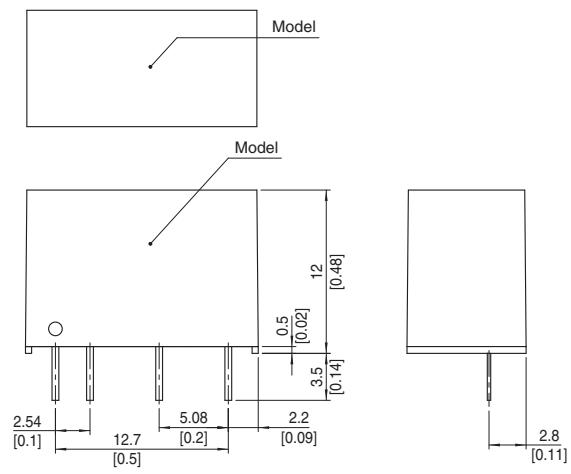
※ Tolerance ±0.5 [±0.02]
※ Dimensions in mm, [ ]= inches
※ Pin terminal material : Copper
※ Planting treatment of terminal : Lead free plating
※ Case material : PBT
※ Weight 4g max