



Main Feature

1. **Through-Hole Reflow** version for soldering process.
2. Miniature size 0.2W low power consumption with rated to 12A.
3. **8mm** coil to contact creepage Surge Strength 10KV.
4. Operating temperature up to 105°C.
5. UL Class F (155°C) insulation available.
6. Comply with RoHS and REACH regulations



Contact Rating

Load Type	GQ (LM)	GQ (LM1)
Rated Load (Resistive)	5A 250VAC	10A 277VAC(TUV) 10K Cycles
	-	10A/250VAC
	-	12A 125 VAC
	5A 30VDC	10A 30VDC
Contact Capacity	-	TV-5 120VAC
Rated Carrying Current	5A	10A
Max. Allowable Voltage	AC 250V	AC 250V
	DC 30V	DC 30V
Max. Allowable Current	5A	12A
Max. Allowable Power Force	1,250VA	2,500VA
	150W	300W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST

Application

Domestic Appliances, Office Machines, Audio Equipment, etc.

Performance (at Initial Value)

- Contact Resistance 100mΩ Max. @1A,6VDC
- Operate Time..... 10mSec. Max.
- Release Time 5 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 4,000VAC at 50/60 Hz for one minute
 - Between Contacts 1,000VAC at 50/60 Hz For one minute
- Surge Strength 10,000V (between coil & contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC
- Max. On/Off Switching:
 - Electrical..... 6 Cycles per Minute
 - Mechanical 300 Cycles per Minute
- Temperature Range..... -40~+105°C
- Humidity Range..... 45~85% RH.
- Coil Temperature Rise..... 40°C Max.
- Vibration:

Endurance 10 to 55 Hz dual amplitude width 1.5mm
 Error Operation..... 10 to 55 Hz dual amplitude width 1.5mm

- Shock:
 - Endurance 1,000 m/S²
 - Error Operation..... 100 m/S²
- Life Expectancy:
 - Mechanical 10⁷ Operations at No Load condition
 - Electrical 10⁵ Operations at Rated Resistive Load
 - TV Rated Load 2.5x10⁴ Operations at
- Weight About 9.0 g

Safety Standard & File Number

- LM:
 - UL & C-UL..... E141060
 - TÜV R50121172
 - VDE..... 40025456
- LM1:
 - UL & C-UL..... E141060
 - TÜV R50121172

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GQ	3	67	45	Abt. 0.20	80% Maximum	5% Minimum	110%
	5	40	125				
	6	33.3	180				
	9	22.5	400				
	12	16.7	720				
	15	13.3	1,125				
	18	11.1	1,620				
	24	8.3	2,880				
	48	4.2	11,520				

Ordering Information

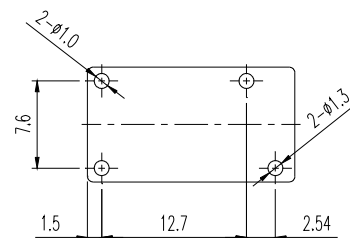
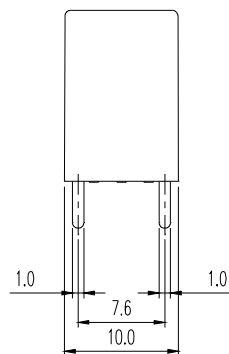
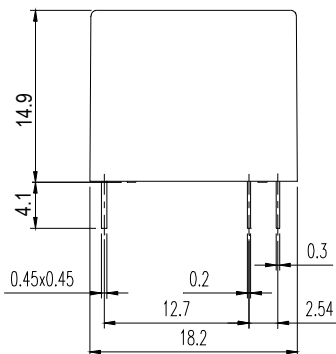
GQ - SS - 1 12 L M 1 F - A R

Soldering Process: R: PCB Through-Hole Reflow Version
Glow Wire Category: Nil: IEC 61810-1
 A: IEC 60335-1 & 61810-1
Insulation System: Nil: Standard Class
 F: Class F
Rated Carrying Current: Nil: 5A
 1: 10A
Contact Form: M: One Form A
Coil Sensitivity: L: High DC
Coil Voltage: 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V
 15: 15V, 18: 18V, 24: 24V, 48: 48V
Number of Pole: 1: One Pole
Type of Sealing: SS: RT II Flux Proofed
Type: GQ

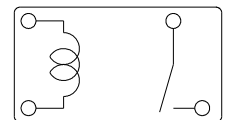
Classification

Model	GQ	
Rated Carrying Current	5A	10A
Flux Proofed	GQ-SS-1□□LM	GQ-SS-1□□LM1/F

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)



P.C.B. Layout

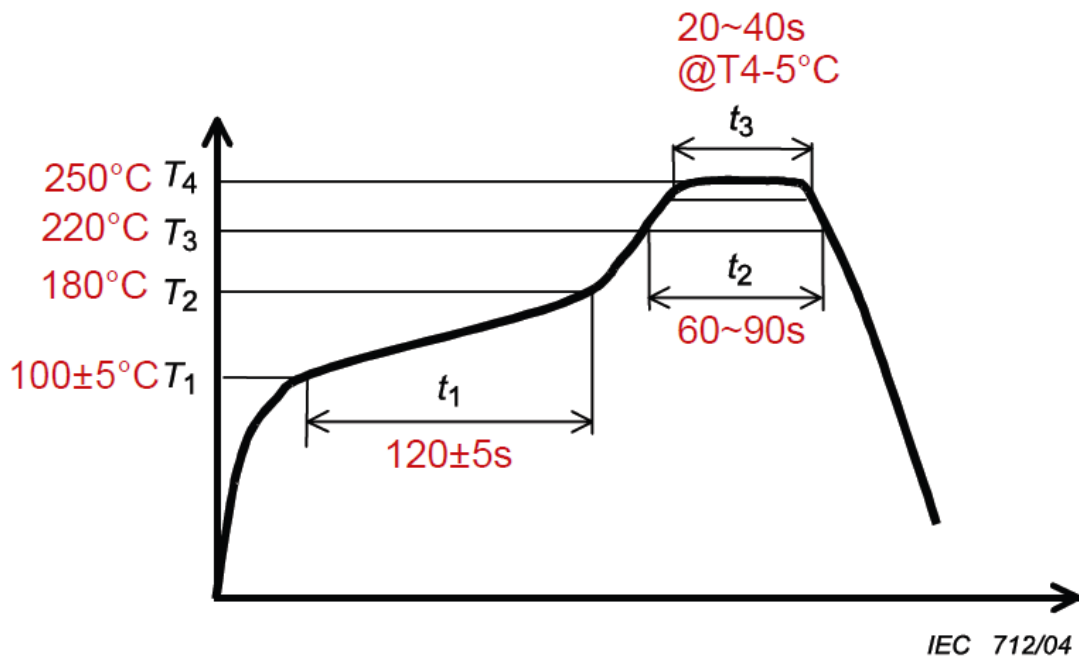


BOTTOM VIEW

V.01GS

Reflow soldering condition:

According to IEC 60068-2-58.



Key

- T_1 Minimum preheating temperature
- T_2 Maximum preheating temperature
- T_3 Soldering temperature
- T_4 Peak temperature
- t_1 Preheating duration
- t_2 Soldering duration
- t_3 Peak temperature duration

Note: we recommend that you confirm your actual solder conditions.