

FEATURES

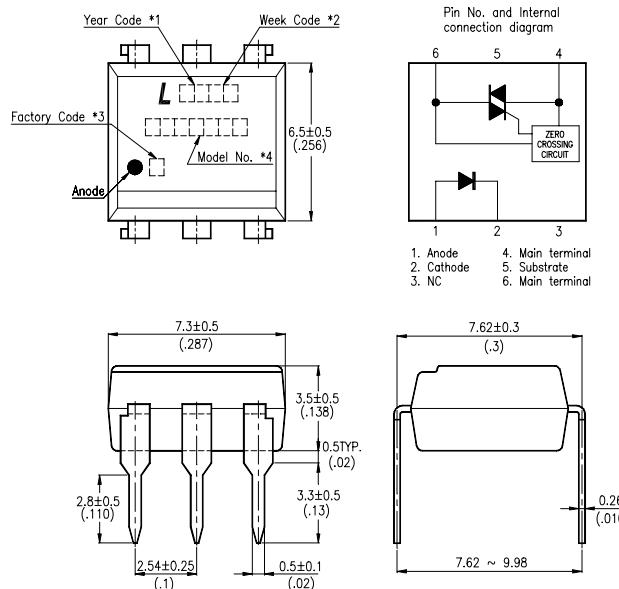
- * Isolation voltage between input and output V_{iso} : 5,000V_{rms}
- * 6pin DIP zero-cross optoisolators triac driver output
- * High repetitive peak off-state voltage V_{DRM} : Min. 600V
- * High critical rate of rise of off-state voltage
(dv/dt : MIN. 600V / μ s)
- * Dual-in-line package :
MOC3061, MOC3062, MOC3063
- * Wide lead spacing package :
MOC3061M, MOC3062M, MOC3063M
- * Surface mounting package :
MOC3061S, MOC3062S, MOC3063S
- * Tape and reel packaging :
TYPE I : MOC3061S-TA1, MOC3062S-TA1, MOC3063S-TA1

APPLICATIONS

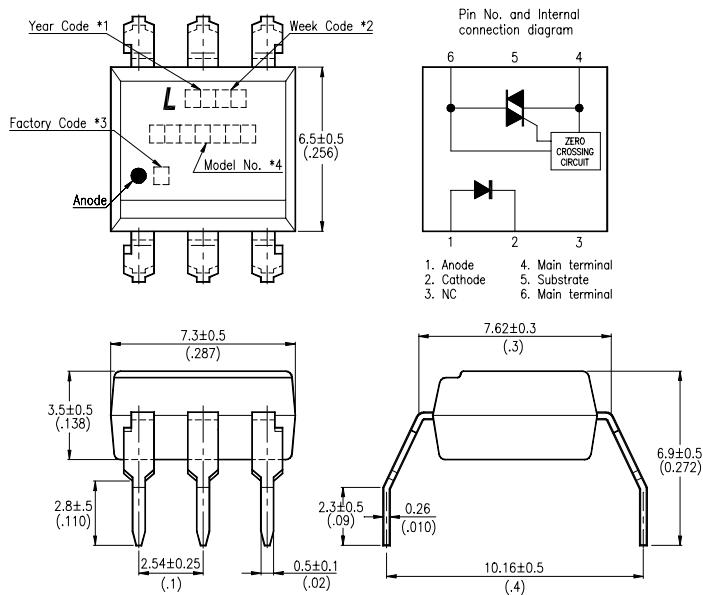
- * AC Motor Drives
- * AC Motor Starters
- * E.M. Contactors
- * Lighting Controls
- * Solenoid/Valve Controls
- * Solid State Relays
- * Static Power Switches
- * Temperature Controls

OUTLINE DIMENSIONS

Dual-in-line package :



Wide lead spacing package:



*1. Year date code.

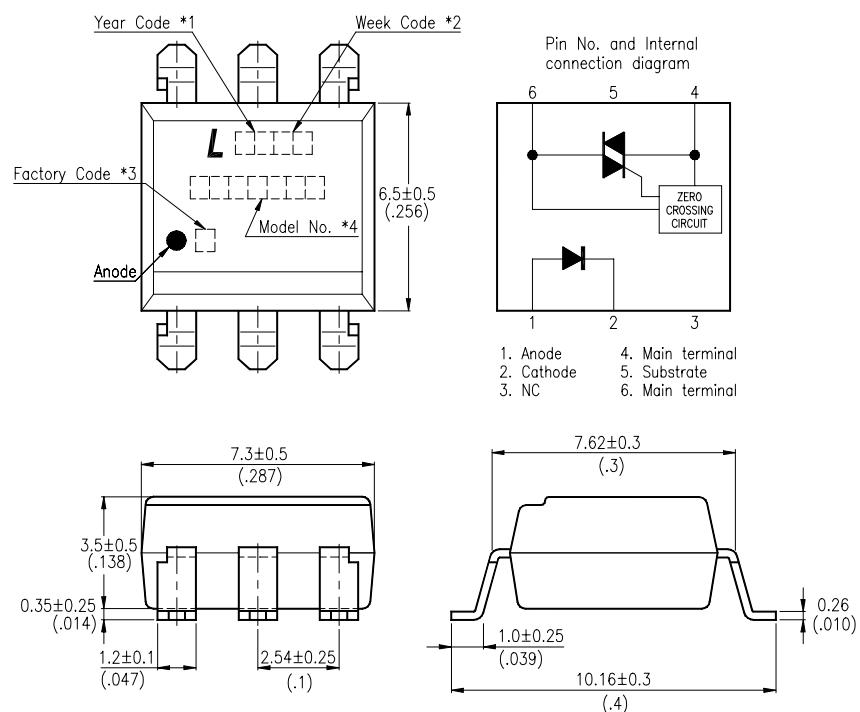
*2. 2-digit work week.

*3. Factory identification mark shall be marked (Z : Taiwan, Y : Thailand, X : China).

*4. Model No.: MOC3061, MOC3062, MOC3063

OUTLINE DIMENSIONS

Surface mounting package :



*1. Year date code.

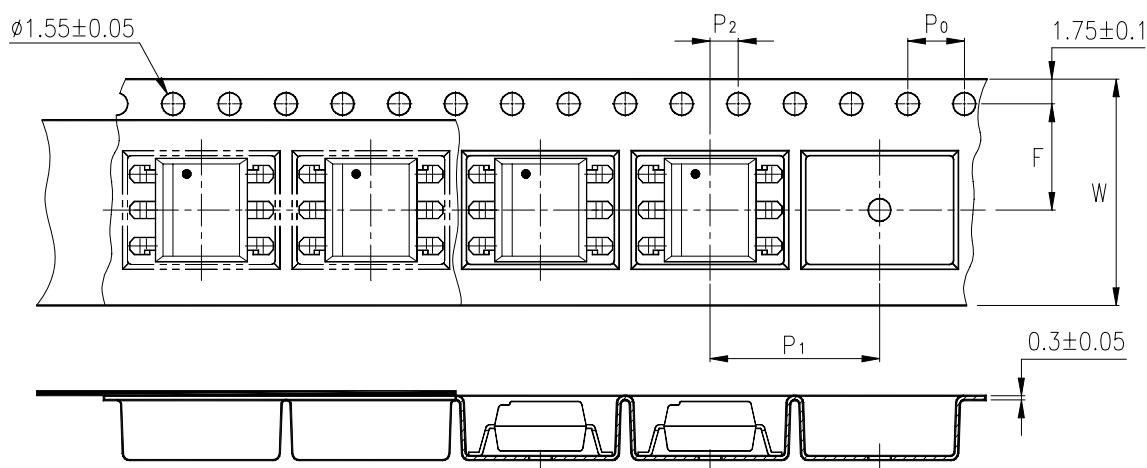
*2. 2-digit work week.

*3. Factory identification mark shall be marked (Z : Taiwan, Y : Thailand, X : China).

*4. Model No.: MOC3061, MOC3062, MOC3063

TAPING DIMENSIONS

Tape and reel package (TYPE I):
MOC3061S-TA1, MOC3062S-TA1, MOC3063S-TA1



| Description | Symbol | Dimensions in mm (inches) |
|--|----------------|-----------------------------|
| Tape wide | W | 16 ± 0.3 (.63) |
| Pitch of sprocket holes | P ₀ | 4 ± 0.1 (.15) |
| Distance of compartment | F | 7.5 ± 0.1 (.295) |
| | P ₂ | 2 ± 0.1 (.079) |
| Distance of compartment to compartment | P ₁ | 12 ± 0.1 (.472) |

ABSOLUTE MAXIMUM RATING

(Ta = 25°C)

| PARAMETER | | SYMBOL | RATING | UNIT |
|-------------------------------------|---|------------------|------------|------|
| INPUT | Forward Current | I _F | 50 | mA |
| | Reverse Voltage | V _R | 6 | V |
| | Power Dissipation | P _D | 120 | mW |
| OUTPUT | Off-State Output Terminal Voltage | V _{DRM} | 600 | V |
| | Peak Repetitive Surge Current (PW=100μs, 120pps) | I _{TSM} | 1 | A |
| | Collector Power Dissipation | P _C | 150 | mW |
| Total Power Dissipation | | P _{tot} | 250 | mW |
| *1 Isolation Voltage | | V _{iso} | 5,000 | Vrms |
| Ambient Operating Temperature Range | | T _A | -40 ~ +100 | °C |
| Storage Temperature Range | | T _{stg} | -55 ~ +150 | °C |
| *2 Soldering Temperature | | T _L | 260 | °C |

*1. AC For 1 Minute, R.H. = 40 ~ 60%

Isolation voltage shall be measured using the following method.

- (1) Short between anode and cathode on the primary side and between collector, emitter on the secondary side.
- (2) The isolation voltage tester with zero-cross circuit shall be used.
- (3) The waveform of applied voltage shall be a sine wave.

*2. For 10 Seconds

ELECTRICAL - OPTICAL CHARACTERISTICS

(Ta = 25°C)

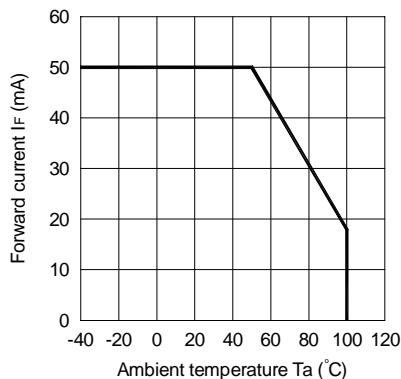
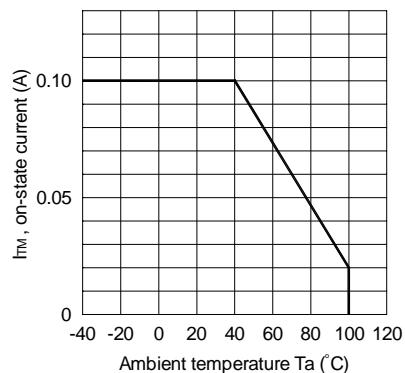
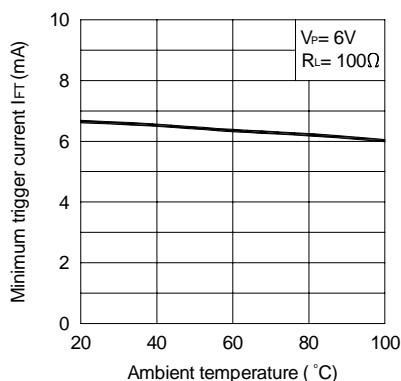
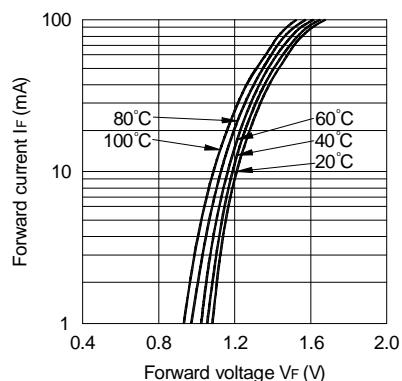
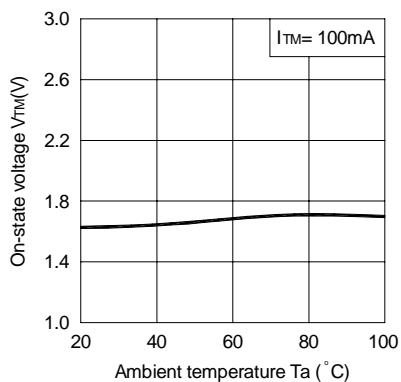
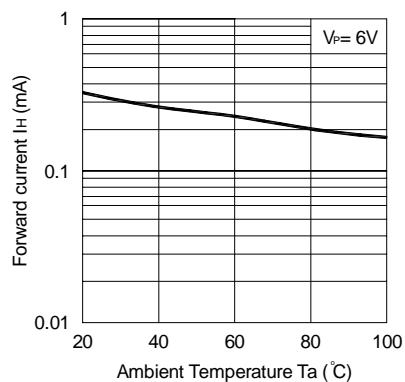
| PARAMETER | | | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS |
|---------------|--|---------|-------------------|------|------|------|-------|--|
| INPUT | Forward Voltage | | V _F | — | 1.2 | 1.4 | V | I _F =20mA |
| | Reverse Current | | I _R | — | 0.05 | 10 | μA | V _R =6V |
| OUTPUT | *1 Peak Blocking Current, Either Direction | | I _{DRM1} | — | — | 500 | nA | V _{DRM} = 600V |
| | Peak On-State Voltage, Either Direction | | V _{TM} | — | — | 3.0 | V | I _{TM} =100 mA Peak |
| | *2 Critical rate of Rise of Off-State Voltage | | dv/dt | 600 | 1500 | — | V/μs | |
| COUPLED | *3 Led Trigger Current, Current Required to Latch Output, Either Direction | MOC3061 | I _{FT} | — | — | 15 | mA | Main Terminal Voltage = 3V |
| | | MOC3062 | | — | — | 10 | | |
| | | MOC3063 | | — | — | 5 | | |
| | Holding Current, Either Direction | | I _H | — | 400 | — | μA | |
| | Turn-On Time | | T _{ON} | — | 8 | 20 | μs | V _P =9V, I _F =20mA R _L = 100Ω |
| ZERO CROSSING | Inhibit Voltage | | V _{INH} | — | 5 | 20 | Volts | I _F =Rated I _{FT} , MT1-MT2 Voltage above which device will not trigger. |
| | Leakage in Inhibited State | | I _{DRM2} | — | — | 500 | μA | I _F = Rated I _{FT} , Rated V _{DRM} , Off State |

*1 Test voltage must be applied within dv/dt rating.

*2 This is static dv/dt. Commutating dv/dt is a function of the load-driving thyristor(s) only.

*3 All devices are guaranteed to trigger at an I_F value less than or equal to max I_{FT}. Therefore, recommended operating I_F lies between max I_{FT} (15 mA for MOC3061, 10mA for MOC3062, 5mA for MOC3063) and absolute max I_F (50mA)

CHARACTERISTICS CURVES

Fig.1 Forward Current vs.
Ambient TemperatureFig.2 On-state Current vs. Ambient
TemperatureFig.3 Minimum Trigger Current
vs. Ambient TemperatureFig.4 Forward Current vs. Forward
VoltageFig.5 On-state Voltage vs. Ambient
TemperatureFig.6 Holding Current vs.
Ambient Temperature

CHARACTERISTICS CURVES

Fig.7 Turn-on Time vs. Forward Current

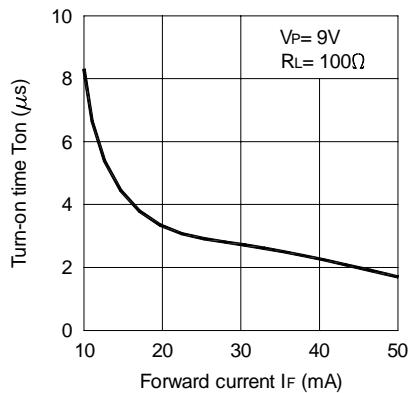


Fig.8 Repetitive Peak Off-state Current vs. Temperature

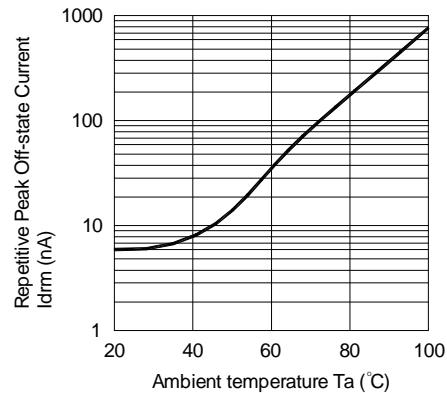
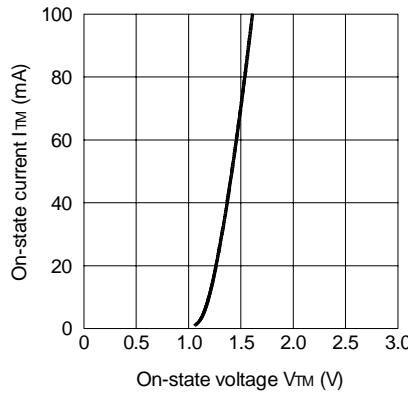
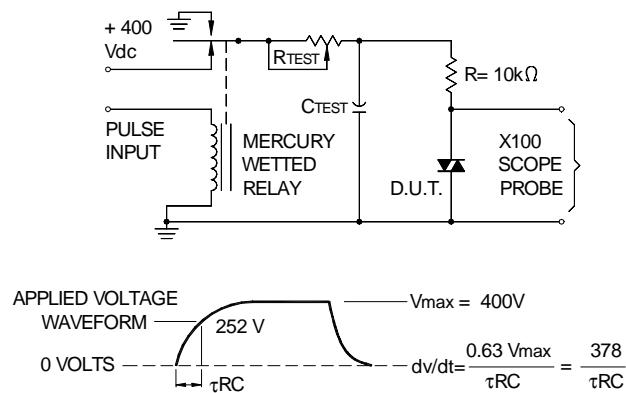


Fig.9 On-state Current vs. On-state Voltage



Static dv/dt Test Circuit



RECOMMENDED FOOT PRINT PATTERNS (MOUNT PAD)

