## JOCMB35Ck-D8P/S Series

Rev.A.1.0

## DESCRIPTION:

The products are 8-pin optical relays. The device consists of an AlGaAs infrared emitting diode input stage optically coupled to a high-voltage output detector circuit in a plastic DIP8 package with different lead forming options. The detector consists of a

The prod b q n r arc d IT /p n q 9he

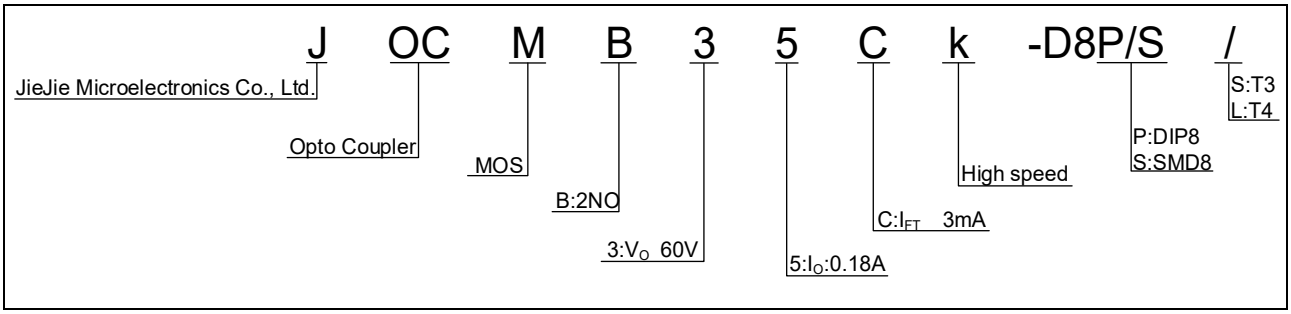
| | | | |
|---|---|---|---|
| Soldering Temperature | $T_{sol}$ | 260 | |

**NOTE1** 100μs pulse, 100Hz frequency
**NOTE2** AC for 1minute, R.H.=40~60%

## ELECTRICAL CHARACTERISTICS (Temperature=25°C)

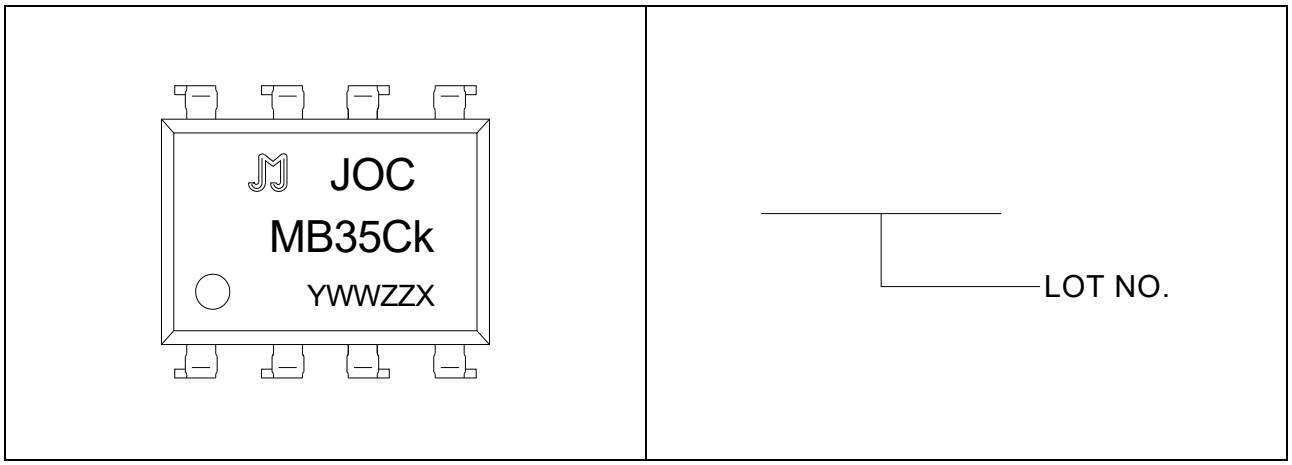
| Parameter | | Symbol | Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|
| Input | Forward Voltage | $V_F$ | $I_F$=10mA | - | 1.2 | 1.5 | V |
| | Reverse Current | $I_R$ | $V_R$=6V | - | - | 1 | μA |
| | Action Current | $I_{F(ON)}$ | $I_L$=$I_{L(MAX)}$ | - | 0.9 | 3 | mA |
| | Reset Current | $I_{F(OFF)}$ | $I_L$=$I_{L(MAX)}$ | 0.4 | 0.8 | - | mA |
| Output | On Resistance | $R_{on}$ | $I_F$=5mA $I_L$=Max. Within 1s on time | - | - | 5 | Ω |
| | Off State Leakage Current | $I_{Leak}$ | $I_F$=0mA, $V_L$=Max. | - | - | 1 | μA |
| | Off State Capacitance | Coff | $I_F$=0mA | - | 6 | - | pF |
| Switching Characteristics | Isolation Resistance | $R_{ISO}$ | DC500V 40~60%R.H. | $10^{12}$ | - | - | Ω |
| | Floating Capacitance | $C_{IO}$ | V=0, f=1MHz | - | - | 1.5 | pF |
| | Turn On Time | $t_{on}$ | $I_F$=5mA, $I_L$=Max. | - | 10 | 100 | μs |
| | Turn Off Time | $t_{off}$ | $I_F$=5mA, $I_L$=Max. | - | 30 | 100 | μs |

## ORDERING INFORMATION




| Packing Quantity | |
|---|---|
| **Option** | **Quantity** |
| DIP | 50 Units/Tube |
| SMD | 1200 Units/Reel |

## MARKING



## Characteristics Curves

**FIG.1:** LED Dropout Voltage vs. Ambient Temperature

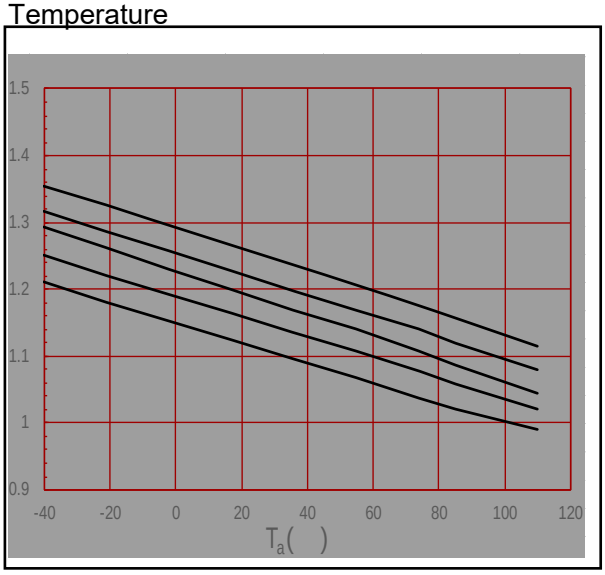



**FIG.2:** Output Current vs. Output Voltage

**FIG.7:** Turn On Time vs. Ambient Temperature

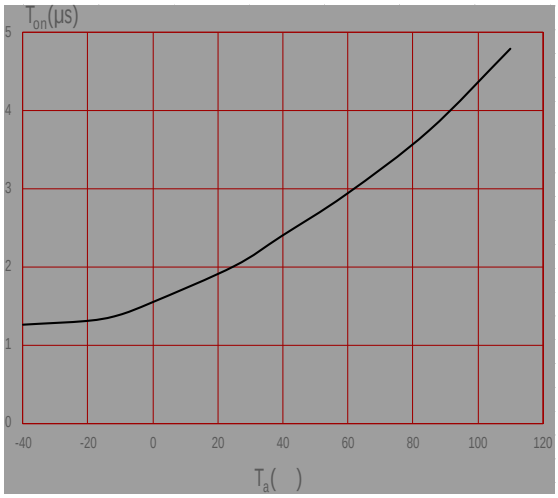



**FIG.8:** Turn Off Time vs. Ambient Temperature

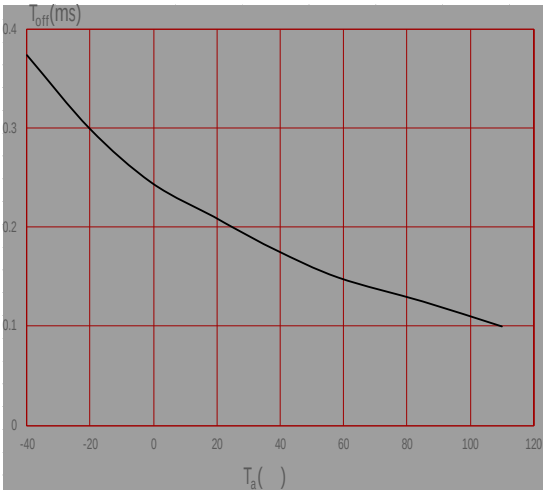



**FIG.9:** Turn On Time vs. LED Forward Current

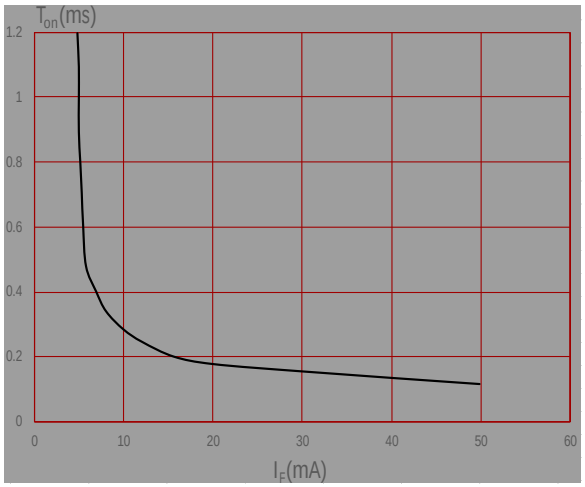



**FIG.10:** Turn Off Time vs. LED Forward Current

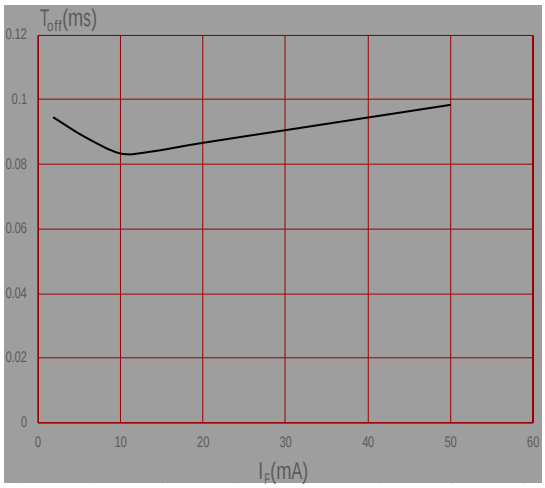



**FIG.11:** Off State Leakage Current vs. Load Voltage

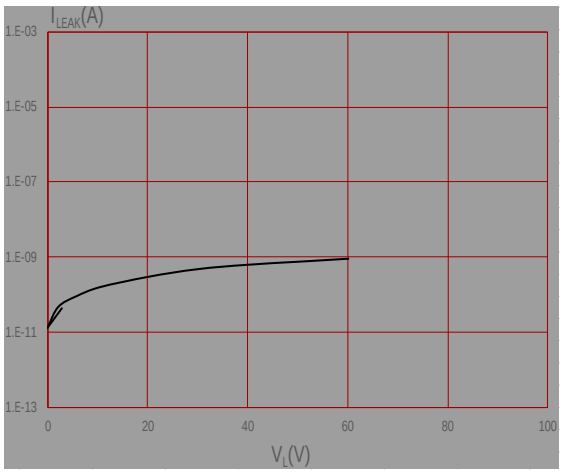
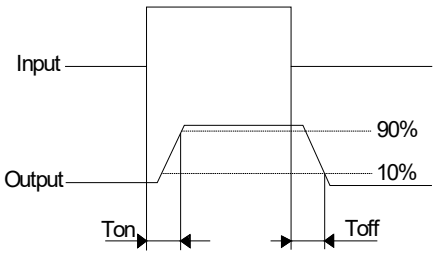
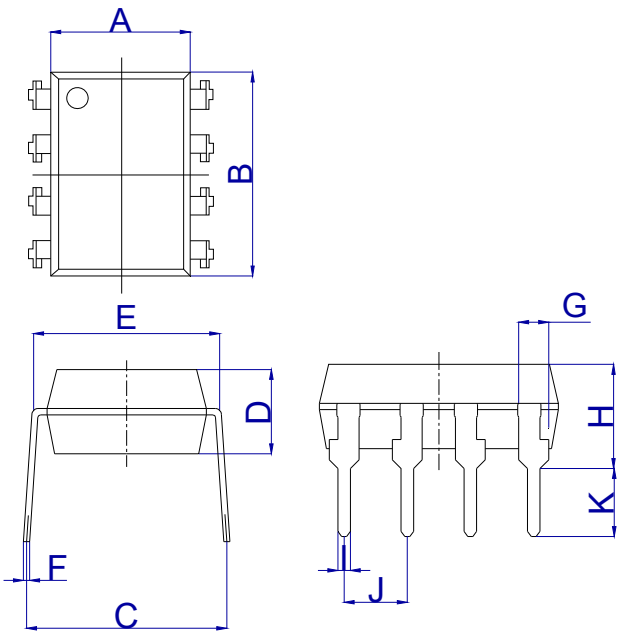



**Fig.12: Turn on/Turn off time**



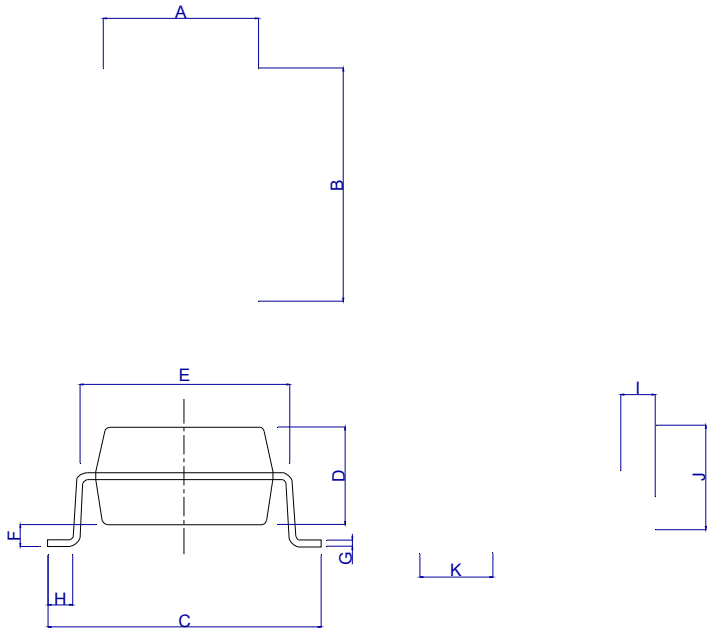
## Package Dimension (Unit: mm)

### Standard DIP Type:



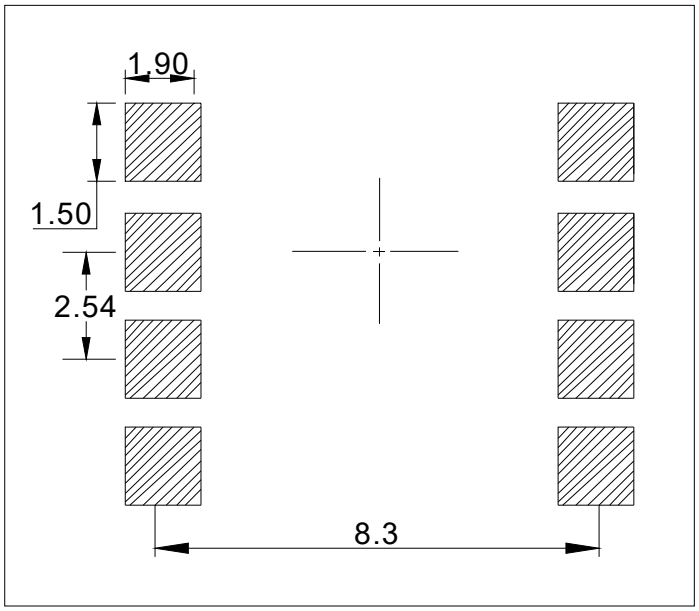

| Ref. | Dimensions | | | | | |
|---|---|---|---|---|---|---|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 6.20 | | 6.60 | 0.244 | | 0.260 |
| B | 9.40 | | 9.80 | 0.370 | | 0.386 |
| C | 7.15 | | 8.95 | 0.281 | | 0.352 |
| D | 3.20 | | 3.60 | 0.126 | | 0.142 |
| E | 7.32 | | 7.92 | 0.288 | | 0.312 |
| F | 0.15 | | 0.35 | 0.006 | | 0.014 |
| G | 0.90 | | 1.50 | 0.035 | | 0.059 |
| H | 3.90 | | 4.50 | 0.154 | | 0.177 |
| I | 0.40 | | 0.60 | 0.016 | | 0.024 |
| J | 2.29 | | 2.79 | 0.090 | | 0.110 |
| K | 2.24 | | 3.24 | 0.088 | | 0.128 |

### Option SMD Type:



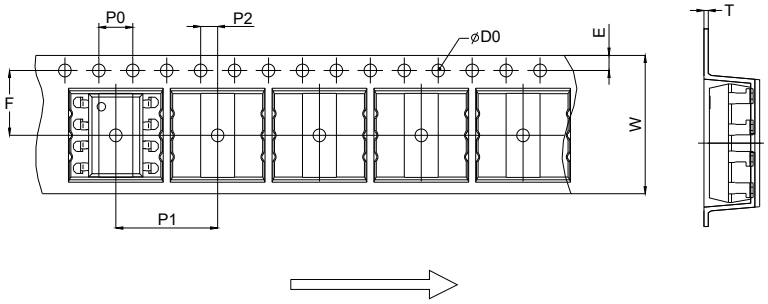

| Ref. | Dimensions | | | | | |
|---|---|---|---|---|---|---|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | | | | | | |
| B | | | | | | |
| C | | | | | | |
| E | | | | | | |

## RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)



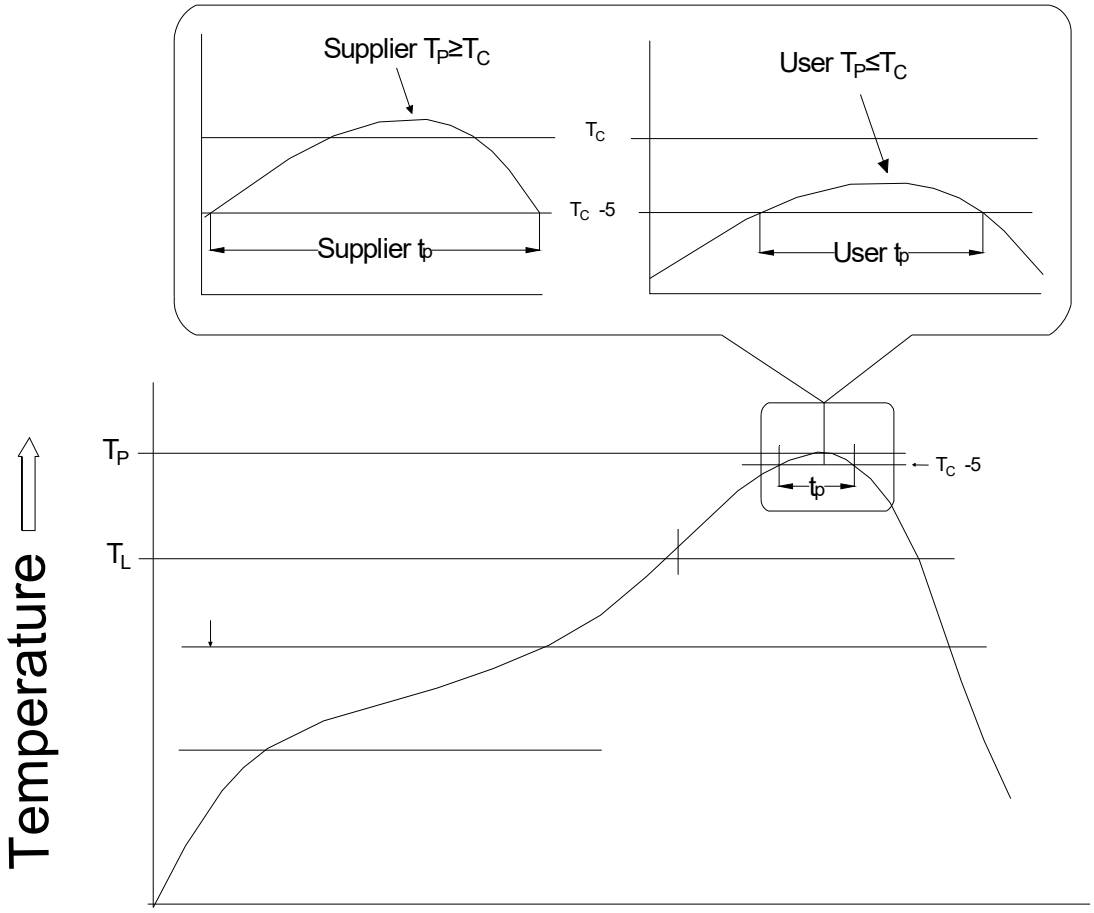

## CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

**Option S/L**

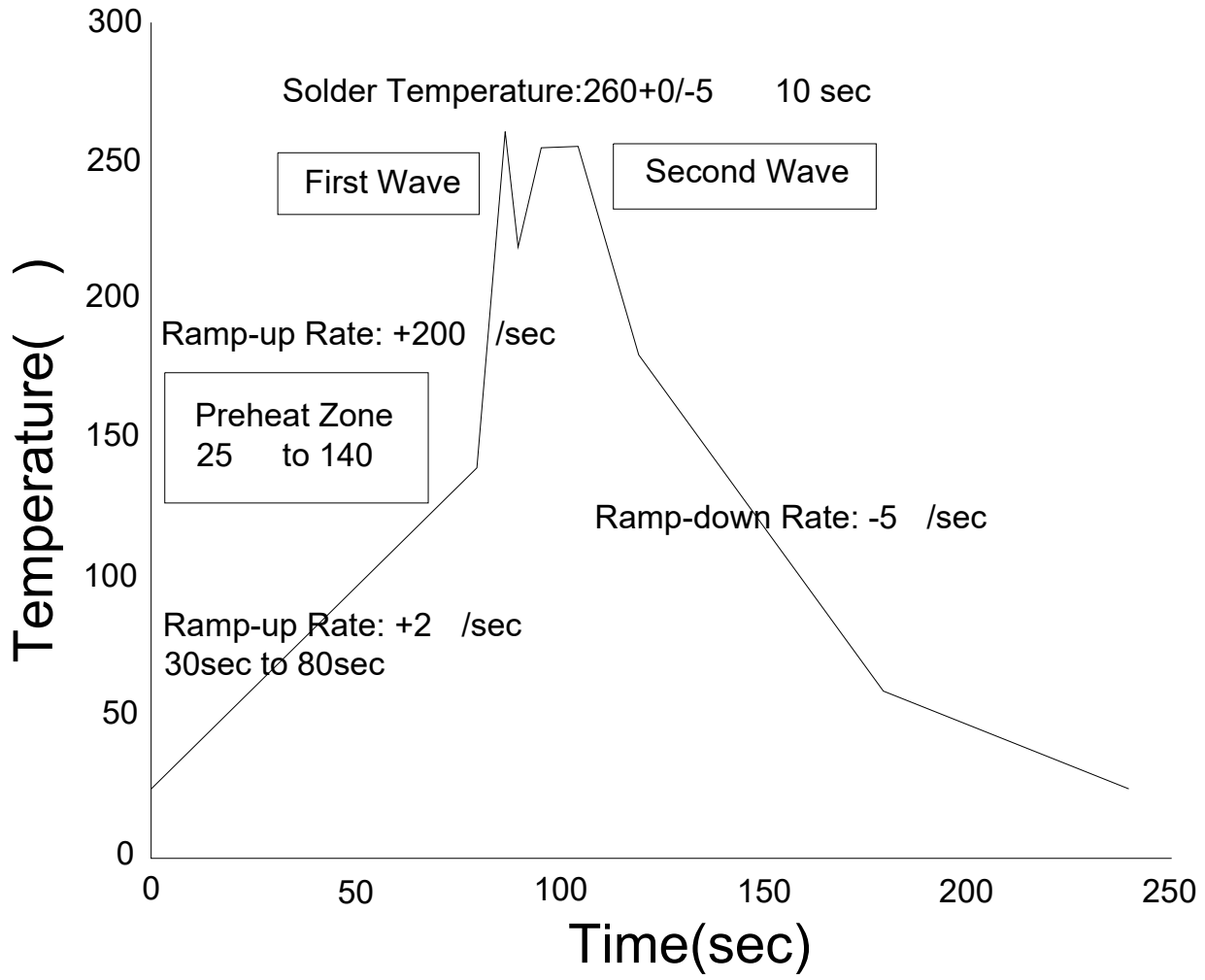



| Ref. | Dimensions | | | | | |
|---|---|---|---|---|---|---|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| D0 | | 1.50 | 1.60 | | 0.059 | 0.063 |
| P0 | 3.90 | 4.00 | 4.10 | 0.154 | 0.157 | 0.161 |
| P1 | 11.90 | 12.00 | 12.10 | 0.469 | 0.472 | 0.476 |
| P2 | 1.90 | 2.00 | 2.10 | 0.075 | 0.079 | 0.083 |
| E | 1.65 | 1.75 | 1.85 | 0.065 | 0.069 | 0.073 |
| F | 7.40 | 7.50 | 7.60 | 0.291 | 0.295 | 0.299 |
| T | 0.35 | 0.40 | 0.45 | 0.014 | 0.016 | 0.018 |
| W | 15.90 | 16.00 | 16.20 | 0.626 | 0.630 | 0.638 |

## REFLOW INFORMATION



## WAVE SOLDERING




| HAND SOLDERING BY SOLDERING IRON | |
|---|---|
| Soldering Temperature | 360 5 |
| Soldering Time | 3s max. |

# JOCMB35Ck