

## FEATURES

- | Size Design 5.0\*5.0\*7.5mm

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- | High Current Handling Capability 5000A @ 8/20  $\mu$ s

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- | Low Capacitance and Insertion Loss

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- | Quick Response and Long Service Life

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- | Moisture sensitivity level: Level 1

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5.0\*5.0\*7.5mm

## APPLICATION INFORMATION

- | Communication equipment.

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- | Repeaters, Modems

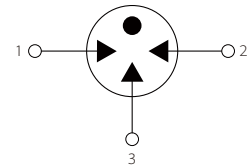
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- | Telephone Interface, Line cards.

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- | Data communication equipment.

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Schematic Symbol

## AGENCY APPROVALS

| Icon  | Solderability                      |
|---|------------------------------------|
| RoHS  | Compliance with 2011/65/EU         |
| HF  | Compliance with IEC61249-2-21:2003 |
|  | Mean lead free                     |
|  | UL Certificated E505857            |

## PRODUCT CHARACTERISTICS

| Lead Material         | Body Material | Terminal Finish       |
|-----------------------|---------------|-----------------------|
| Copper or Fe-Ni alloy | Ceramics      | 100% Matte-Tin Plated |

## ELECTRICAL PARAMETER

| Parameter                         | Symbol                | Rating                              | Unit |
|-----------------------------------|-----------------------|-------------------------------------|------|
| DC Blocking Voltage 1)            | 100V/s                | 376-564                             | V    |
| Impulse Spark-over Voltage        | At 1kV/μs             | for 99 % of measured values ≤1000   | V    |
|                                   | At 1kV/μs             | Typical values of distribution ≤900 | V    |
| Impulse Discharge Current 2)      | 8/20μs                | 5                                   | KA   |
| Insulation Resistance             | DC=100V               | ≥ 1                                 | GΩ   |
| Capacitance at 1MHz               | V <sub>DC</sub> =0.5V | ≤ 1                                 | pF   |
| Operating and Storage Temperature |                       | -40~90                              | °C   |

1) In ionized mode

2) Terms and waveforms in accordance with ITU-T Rec. K. 12; IIEC 61643-311

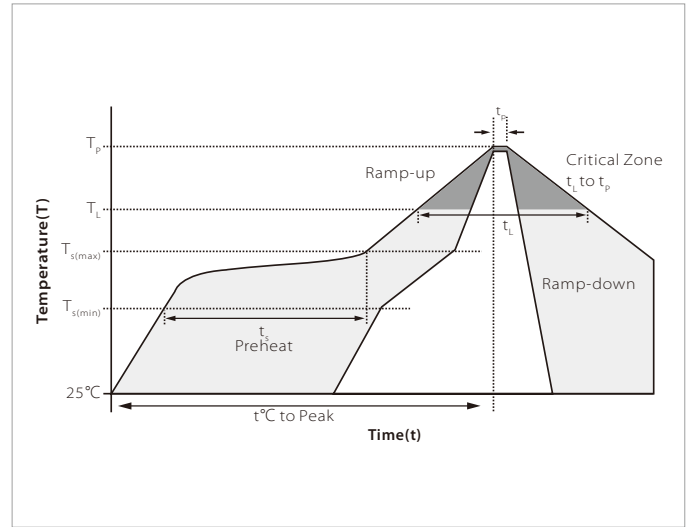
## ENVIRONMENTAL RELIABILITY CHARACTERISTICS

| Testing items                 | Technical standards                                  |
|-------------------------------|--|
| High Temperature Storage Test | Temperature: 85°C ; Time:2H                          |
| Low Temperature Storage Test  | Temperature: -40°C ; Time:2H                         |
| Vibration                     | Frequency: 10-500Hz ; Amplitude: 0.15mm ; Time:45min |
| Resistance of soldering heat  | Temperature: 260°C; Time of dip soldering: 10s,1time |

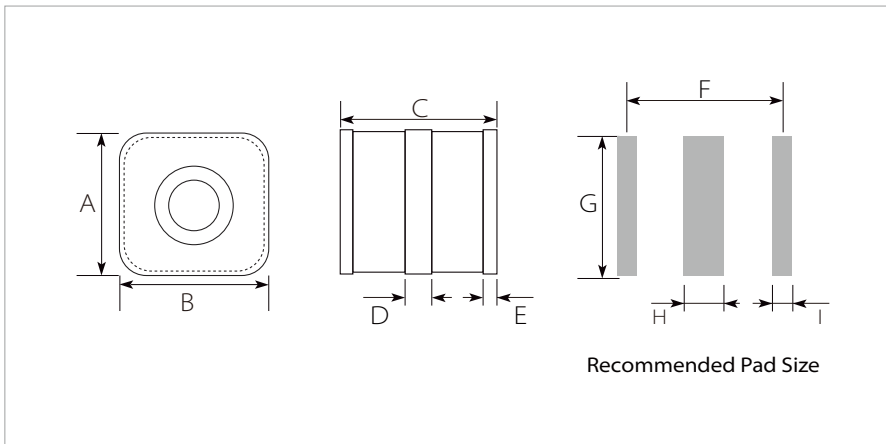
**NOTE:** Up-screen program can be specified by customer's request via contacting Semiware service

## REFLOW PROFILE

| Reflow Condition  |                                  | Lead-free assembly |
|---|----------------------------------|--------------------|
| Pre Heat  | Temperature Min                  | 150°C              |
|   | Temperature Max                  | 200°C              |
|   | Time(min to max)                 | 60~180 secs        |
| Average ramp up rate (Liquidus)Temp ( $T_L$ ) to peak $T_s(\text{max})$ to $T_L$ - Ramp-up Rate |                                  | 3°C/second max     |
| Reflow  | Temperature ( $T_L$ ) (Liquidus) | 217°C              |
|   | Time(min to max)( $t_s$ )        | 60~150 seconds     |
| Peak Temperature ( $T_p$ )  |                                  | 260 °C             |
| Time within 5°C of actual peak Temperature ( $t_p$ )  |                                  | 20~40 seconds      |
| Ramp-down Rate  |                                  | 6°C/second max     |
| Time 25°C to peak Temperature ( $T_p$ )   |                                  | 8 minutes max.     |
| Do not exceed   |                                  | 260°C              |

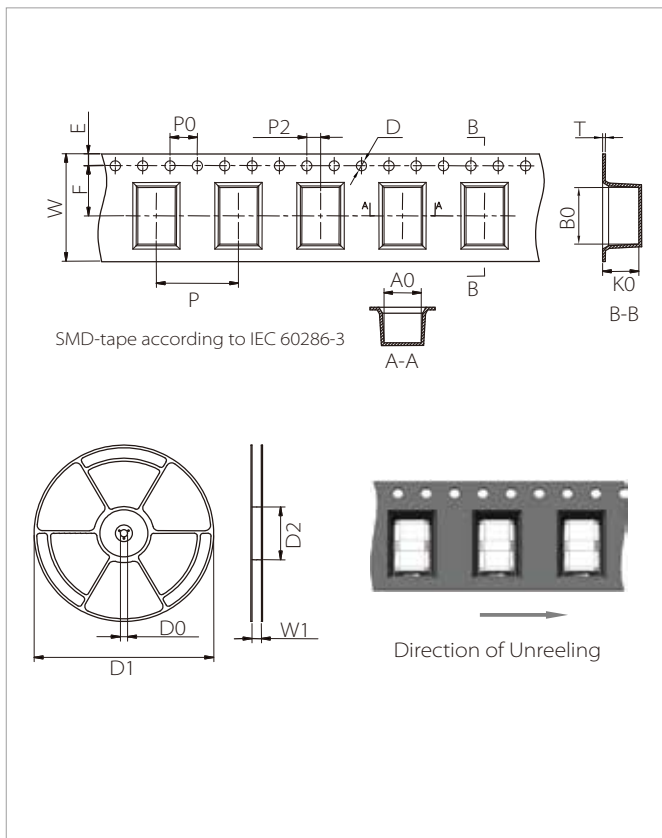


## PRODUCT DIMENSIONS



| Ref. | Outline Dimensions |
|------|--------------------|
|      | Millimeters        |
| A    | 5.0±0.2            |
| B    | 5.0±0.2            |
| C    | 7.5±0.3            |
| D    | 1.5±0.3            |
| E    | 0.5±0.2            |
| F    | 6.4                |
| G    | 5.5                |
| H    | 2.8                |
| I    | 1.6                |

## TAPE AND REEL SPECIFICATION



| Ref. | Dimensions   |                    |
|------|--------------|--------------------|
|      | Millimeters  | Inches             |
| W    | 16±0.3       | 0.630±0.012        |
| A0   | 5.4±0.1      | 0.213±0.004        |
| B0   | 8.4±0.1      | 0.331±0.004        |
| K0   | 5.3±0.1      | 0.209±0.004        |
| P    | 12±0.1       | 0.472±0.004        |
| F    | 7.5±0.1      | 0.295±0.004        |
| E    | 1.75±0.1     | 0.069±0.004        |
| D    | 1.5+0.1/-0.0 | 0.059+0.004/-0.0   |
| P0   | 4±0.1        | 0.157±0.004        |
| P2   | 2±0.1        | 0.079±0.004        |
| T    | 0.4±0.1      | 0.016±0.004        |
| D0   | 13.3±0.15    | 0.524±0.006        |
| D1   | 330±2        | 12.992±0.079       |
| D2   | 100+1/-2     | 3.937+0.039/-0.079 |
| W1   | 16.5±0.4     | 0.65±0.016         |

## ORDERING INFORMATION

| Part Number | Size          | QTY/Reel | Reel Size |
|-------------|---------------|----------|-----------|
| SG3D05B470B | 5.0*5.0*7.5mm | 1000PCS  | 13"       |

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