

## FEATURES

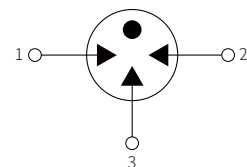
- | Size Design 5.0\*5.0\*7.5mm
- | High Current Handling Capability 5000A @ 8/20  $\mu$ s
- | Low Capacitance and Insertion Loss
- | Quick Response and Long Service Life
- | Moisture sensitivity level: Level 1



5.0\*5.0\*7.5mm

## APPLICATION INFORMATION

- | Communication equipment.
- | Repeaters, Modems
- | Telephone Interface, Line cards.
- | Data communication equipment.



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/ $\mu$ s       | for 99 % of measured values $\leq 1000$   | V          |
|                                   | At 1kV/ $\mu$ s       | Typical values of distribution $\leq 900$ | V          |
| Impulse Discharge Current 2)      | 8/20 $\mu$ s          | 5                                         | KA         |
| Insulation Resistance             | DC=100V               | $\geq 1$                                  | G $\Omega$ |
| Capacitance at 1MHz               | V <sub>DC</sub> =0.5V | $\leq 1$                                  | 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

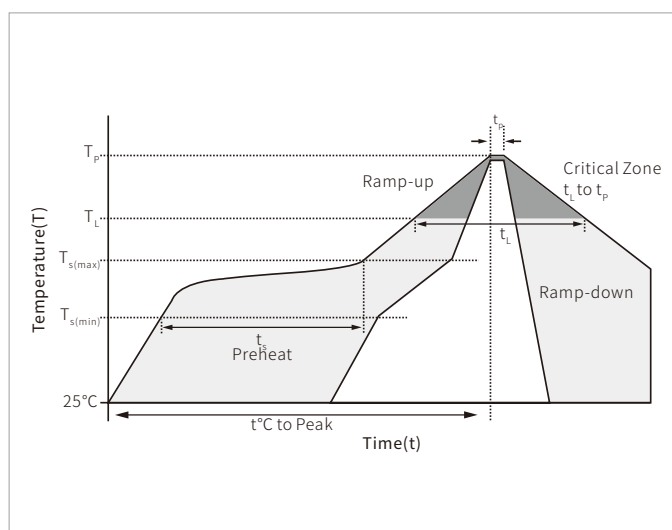
## ENVIRONMENTAL RELIABILITY CHARACTERISTICS

| 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 |

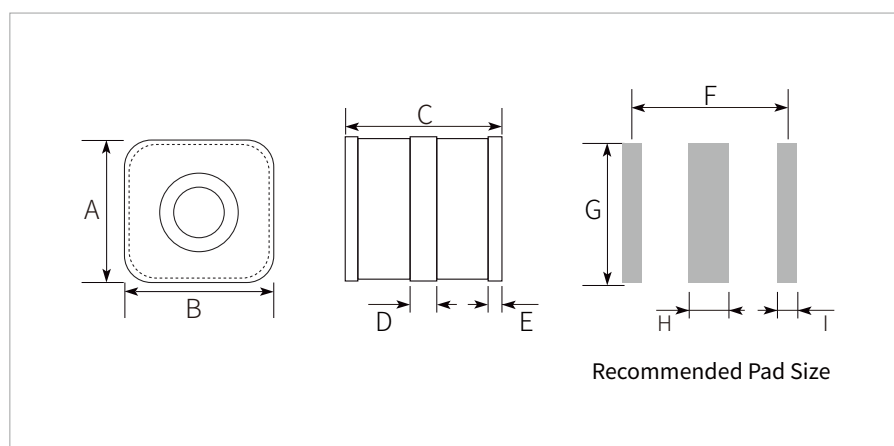
**NOTE:**Up-screen program can be specified by customer' s request via contacting Semiware service

## 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 $T_s(max)$ 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              |

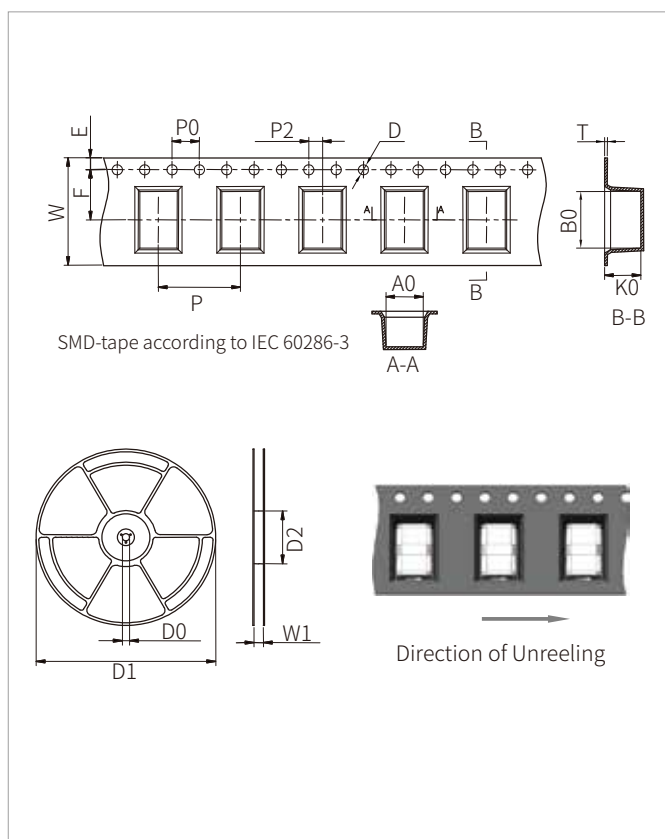


## PRODUCT DIMENSIONS



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

## ORDERING INFORMATION

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

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