

## FEATURES

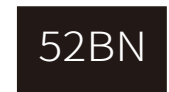
- | 72 Watts Peak Pulse Power per Line (tp=8/20μs)
- | Protects two I/O lines
- | Working voltages : 5 V
- | Low leakage current
- | Low clamping voltage

## APPLICATIONS

- | Personal digital assistants (PDA's)
- | Notebooks, Desktops, and Servers
- | Cell phone Handsets and Accessories
- | Portable Electronics
- | IoT Terminal Equipment/Device
- | Smart Wearable Device



DFN1006-3L



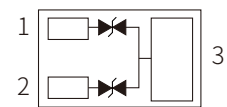
Marking

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

## APPROVALS

|             |                                    |
|-------------|------------------------------------|
| <b>RoHS</b> | Compliance with 2011/65/EU         |
| <b>HF</b>   | Compliance with IEC61249-2-21:2003 |



Schematic Symbol

## THERMAL CONSIDERATIONS

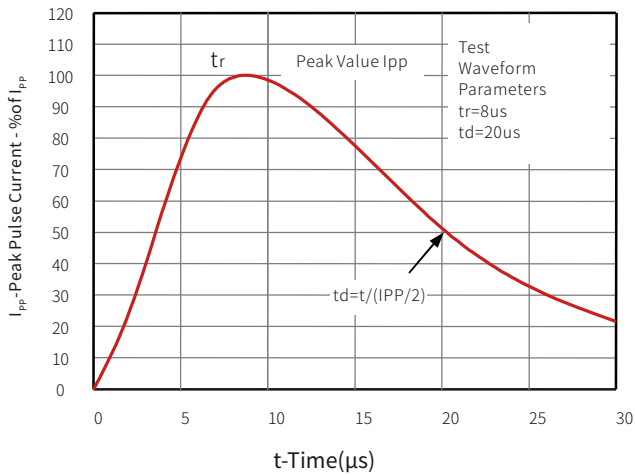
| Symbol    | Parameter                             | Value       | Unit  |
|-----------|---------------------------------------|-------------|-------|
| $P_{pp}$  | Peak Pulse Power (tp=8/20μs waveform) | 72          | Watts |
| $T_J$     | Operating Temperature Range           | -55 to +125 | °C    |
| $T_{STG}$ | Storage Temperature Range             | -55 to +125 | °C    |

## ELECTRICAL CHARACTERISTICS

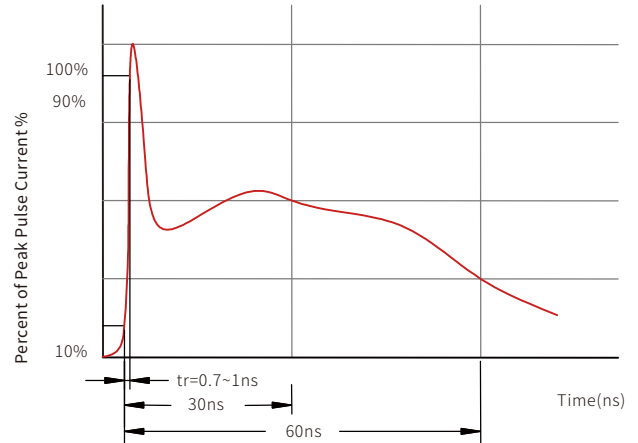
| Symbol     | Parameter                      | Condition                                                                                                | Min. | Typ. | Max. | Unit |
|------------|--------------------------------|----------------------------------------------------------------------------------------------------------|------|------|------|------|
| $V_{RWM}$  | Reverse Stand-off Voltage      |                                                                                                          |      |      | 5.0  | V    |
| $V_{BR}$   | Reverse Breakdown Voltage      | $I_T=1mA$                                                                                                | 5.6  |      |      | V    |
| $I_R$      | Reverse Leakage Current        | $V_{RWM}=5V$                                                                                             |      |      | 1.0  | μA   |
| $V_C$      | Clamping Voltage               | $I_{pp}=1A, tp=8/20\mu s$                                                                                |      | 6.5  | 8.0  | V    |
| $V_C$      | Clamping Voltage               | $I_{pp}=6A, tp=8/20\mu s$                                                                                |      | 9.0  | 12   | V    |
| $I_{PP}$   | Peak Pulse Current             | tp=8/20μs                                                                                                |      |      | 6    | A    |
| $V_{CTLP}$ | TLP Clamping Voltage           | $I_{pp}=16A$<br>IEC61000-4-2<br>Level 4 equivalent<br>(±8kV Contact,<br>±15kV Air)<br>Pin 1 or 2 to Pin3 |      | 9.5  |      | V    |
| $C_J$      | Off State Junction Capacitance | $V_R=0V, f=1MHz$<br>Pin 1 or 2 to Pin3                                                                   |      | 14.0 | 18.0 | pF   |

## CHARACTERISTIC CURVES

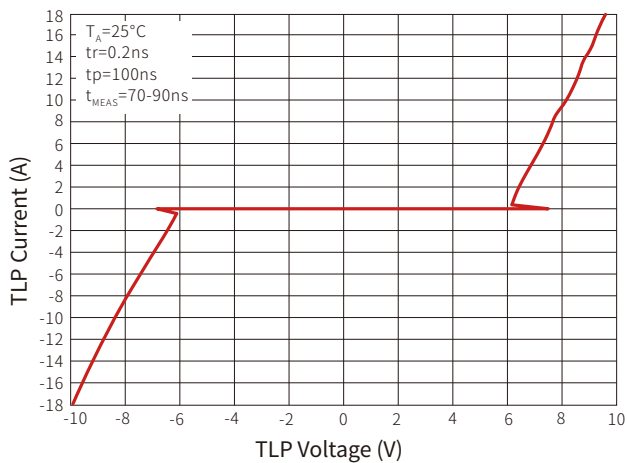
8/20 $\mu$ s Pulse Waveform



ESD Pulse Waveform (according to IEC 61000-4-2)

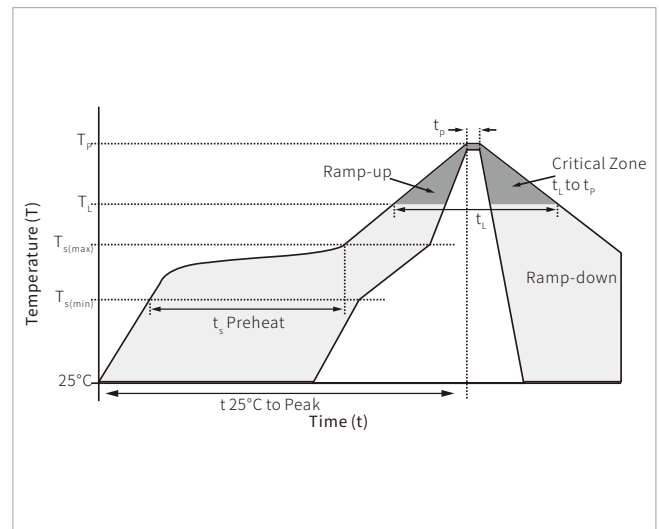


Transmission Line Pulsing (TLP) Measurement

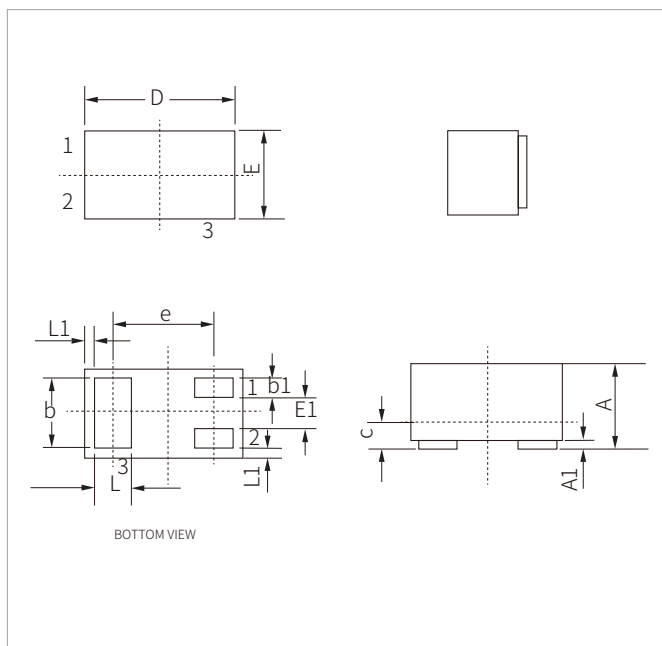


## SOLDERING PARAMETERS

| Reflow Condition                                      |                                  | Lead-free assembly |
|-------------------------------------------------------|----------------------------------|--------------------|
| Pre Heat                                              | Temperature Max ( $T_{s(min)}$ ) | 150°C              |
|                                                       | Temperature Max ( $T_{s(max)}$ ) | 200°C              |
|                                                       | Time (min to max) ( $t_s$ )      | 60 – 180 secs      |
| Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak |                                  | 3°C/second max     |
| $T_{s(max)}$ to $T_L$ - Ramp-up Rate                  |                                  | 3°C/second max     |
| Reflow                                                | Temperature ( $T_L$ ) (Liquidus) | 217°C              |
|                                                       | Time (min to max) ( $t_L$ )      | 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              |

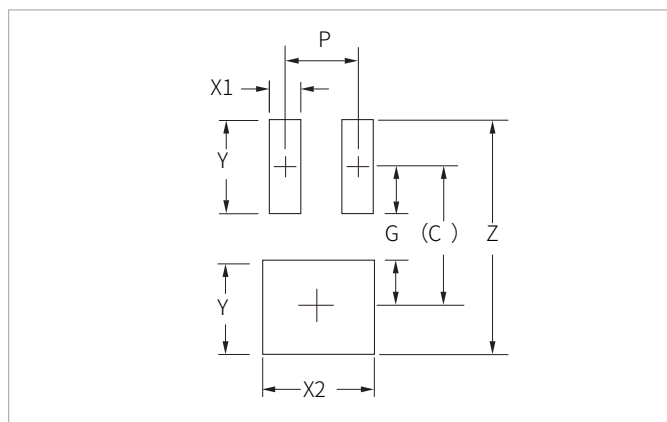


## DFN1006-3L PACKAGE INFORMATION



| Ref. | Millimeters |      | Inches   |       |
|------|-------------|------|----------|-------|
|      | Min.        | Max. | Min.     | Max.  |
| A    | 0.35        | 0.50 | 0.014    | 0.020 |
| A1   | 0           | 0.05 | 0        | 0.002 |
| b    | 0.45        | 0.55 | 0.018    | 0.022 |
| b1   | 0.10        | 0.20 | 0.004    | 0.008 |
| c    | 0.12        | 0.18 | 0.005    | 0.007 |
| D    | 0.95        | 1.05 | 0.037    | 0.041 |
| e    | 0.65BSC     |      | 0.026BSC |       |
| E    | 0.55        | 0.70 | 0.022    | 0.027 |
| E1   | 0.20        | 0.30 | 0.008    | 0.014 |
| L    | 0.20        | 0.30 | 0.008    | 0.012 |
| L1   | 0.05REF     |      | 0.002REF |       |

## RECOMMENDED PAD LAYOUT DIMENSIONS



| Ref. | Millimeters | Inches  |
|------|-------------|---------|
| C    | (0.85)      | (0.033) |
| P    | 0.40        | 0.016   |
| G    | 0.30        | 0.012   |
| X1   | 0.20        | 0.008   |
| X2   | 0.60        | 0.024   |
| Y    | 0.55        | 0.022   |
| Z    | 1.40        | 0.055   |

## ORDERING INFORMATION

| Part Number       | Component Package | QTY/Reel | Reel Size |
|-------------------|-------------------|----------|-----------|
| SE10P3F07B5.0B-SP | DFN1006-3L        | 10000PCS | 7"        |

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