

FEATURES

- Low Capacitance: 8pF(typ)
- Reverse Working Voltage: 12V
- Meet AEC-Q101 Requirements

APPLICATIONS

- Smart Phone and Tablet PC
- TV and Set Top Box
- Wearable Devices
- PDA



DFN1006



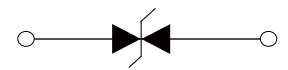
Marking

IEC COMPATIBILITY

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

APPROVALS

- RoHS** Compliance with 2011/65/EU
- HF** Compliance with IEC61249-2-21:2003



Schematic Symbol

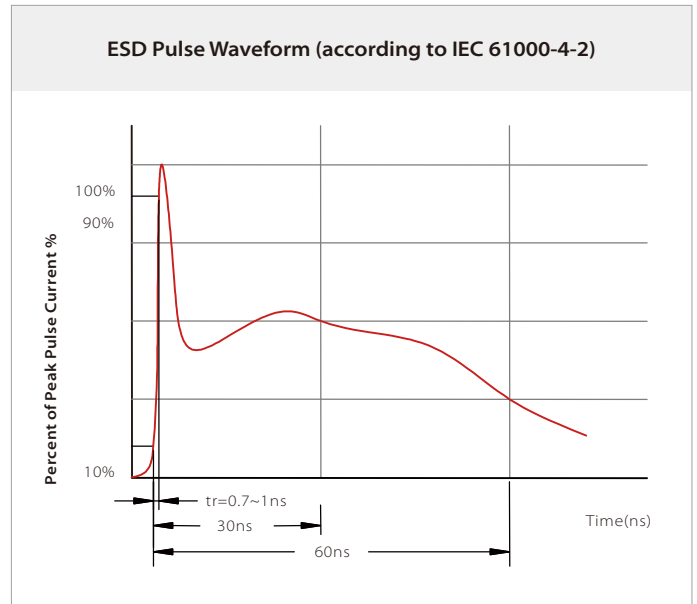
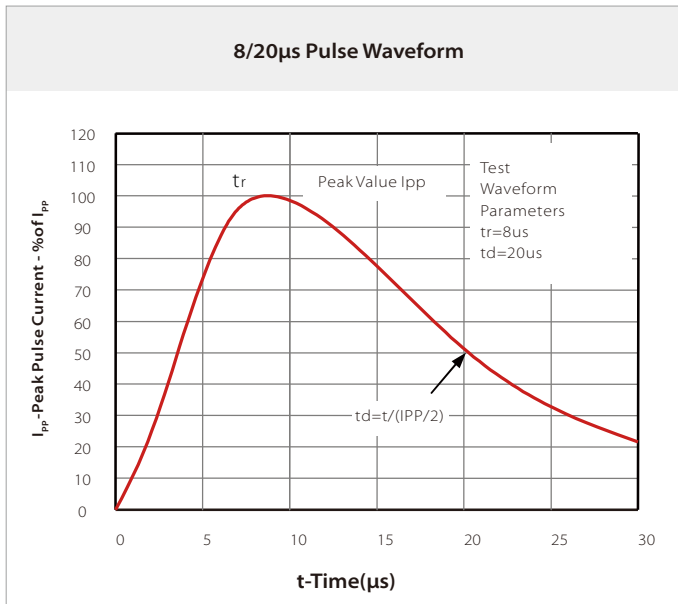
THERMAL CONSIDERATIONS

| Symbol | Parameter | Value | Unit |
|-----------|---------------------------------------|-------------|-------|
| P_{PP} | Peak Pulse Power (tp=8/20μs waveform) | 150 | Watts |
| T_J | Operating Temperature Range | -55 to +150 | °C |
| T_{STG} | Storage Temperature Range | -55 to +150 | °C |

ELECTRICAL CHARACTERISTICS

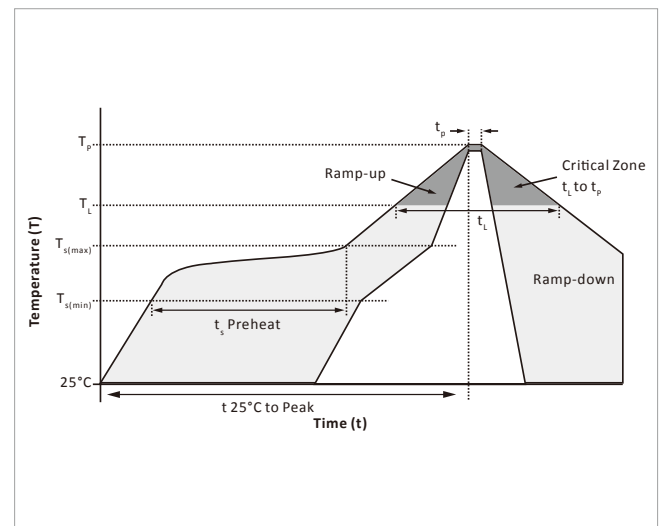
| Symbol | Parameter | Condition | Min. | Typ. | Max. | Unit |
|-----------|--------------------------------|------------------------|------|------|------|------|
| V_{RWM} | Reverse Stand-off Voltage | | | | 12 | V |
| V_{BR} | Reverse Breakdown Voltage | $I_T=1mA$ | 14 | 14.5 | 15 | V |
| I_R | Reverse Leakage Current | $V_{RWM}=12V$ | | | 0.1 | μA |
| V_C | Clamping Voltage (Tp=8/20us) | $I_{pp}=8A, tp=8/20us$ | | | 19 | V |
| I_{PP} | Peak Pulse Current (Tp=8/20us) | tp=8/20us | | | 8 | A |
| C_J | Off State Junction Capacitance | $V_R=0V, f=1MHz$ | | 8 | 8.5 | pF |

CHARACTERISTIC CURVES

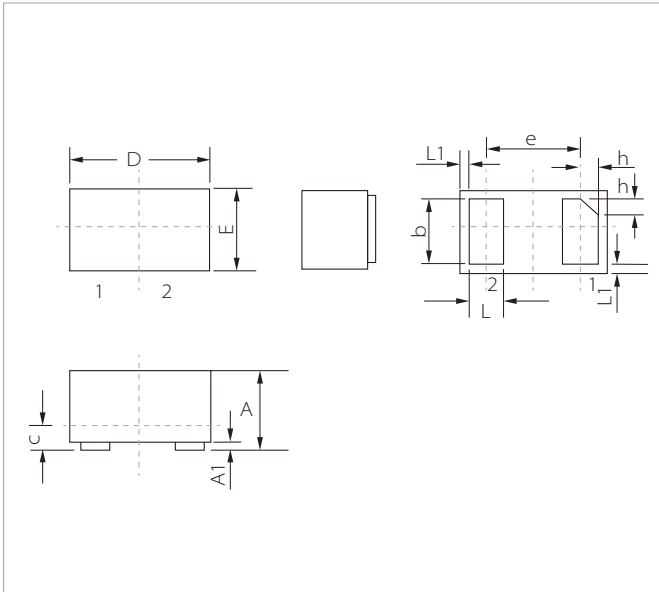


SOLDERING PARAMETERS

| 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_p) | 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 |

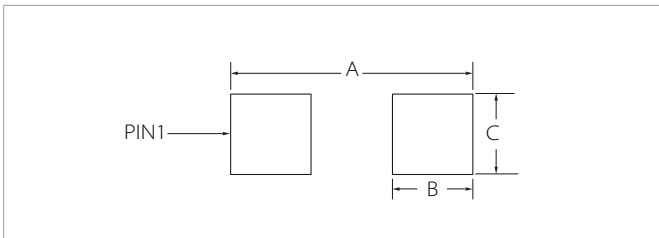


DFN1006 PACKAGE INFORMATION



| Ref. | Millimeters | | Inches | |
|------|-------------|------|----------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.35 | 0.50 | 0.014 | 0.020 |
| A1 | 0 | 0.05 | 0 | 0.002 |
| b | 0.40 | 0.55 | 0.016 | 0.022 |
| 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 |
| L | 0.20 | 0.35 | 0.008 | 0.014 |
| L1 | 0.05REF | | 0.002REF | |
| h | 0.07 | 0.17 | 0.003 | 0.007 |

RECOMMENDED PAD LAYOUT DIMENSIONS



| Ref. | Millimeters | Inches |
|------|-------------|--------|
| A | 1.20 | 0.047 |
| B | 0.47 | 0.019 |
| C | 0.60 | 0.024 |

ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|---------------|-------------------|----------|-----------|
| TPSE10F20B12A | DFN1006 | 10000PCS | 7" |

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