

FEATURES

- | 35 Watts Peak Pulse Power per Line (tp=8/20μs)
- | Protects one bidirectional I/O line
- | Working voltages : 24 V
- | Low leakage current
- | Low clamping voltage

APPLICATIONS

- | Smart phones
- | Display Ports
- | MDDI Ports
- | USB Ports
- | Digital Video Interface (DVI)
- | PCI Express and Serial SATA Ports



DFN0603



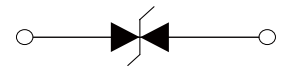
Marking

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±15kV (air), ±15kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

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



Schematic Symbol

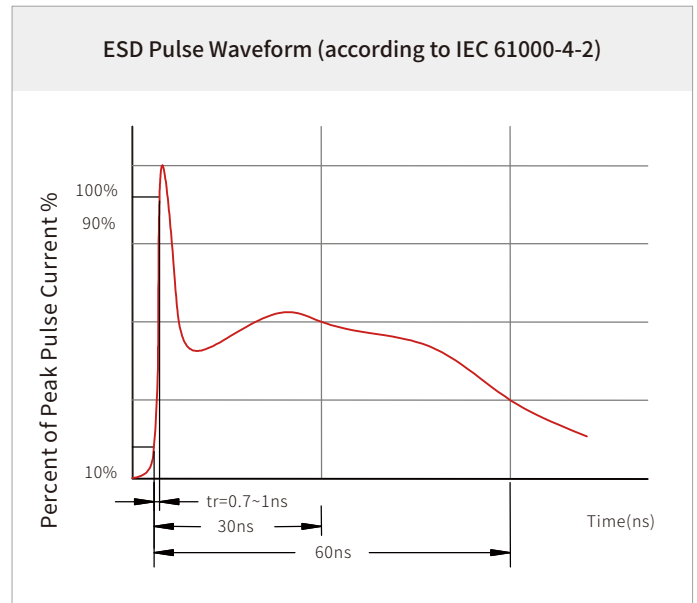
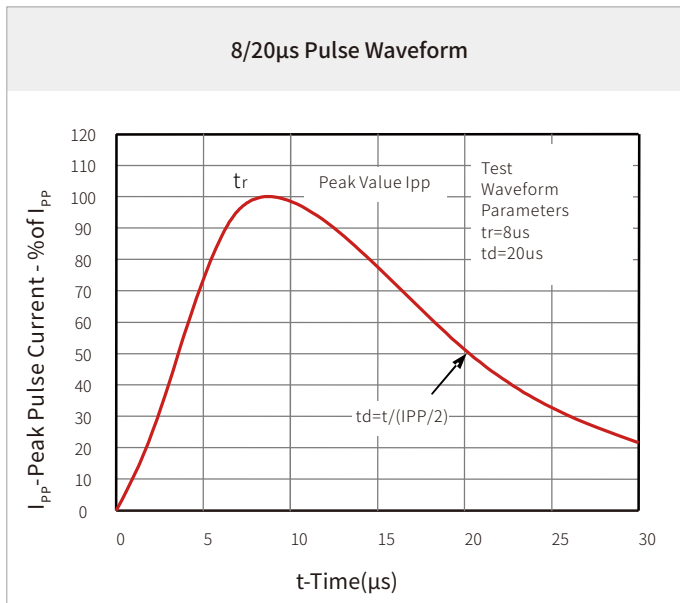
THERMAL CONSIDERATIONS

| Symbol | Parameter | Value | Unit |
|-----------|---------------------------------------|-------------|-------|
| P_{PP} | Peak Pulse Power (tp=8/20μs waveform) | 35 | Watts |
| T_J | Operating Temperature Range | -40 to +125 | °C |
| T_{STG} | Storage Temperature Range | -55 to +150 | °C |

ELECTRICAL CHARACTERISTICS

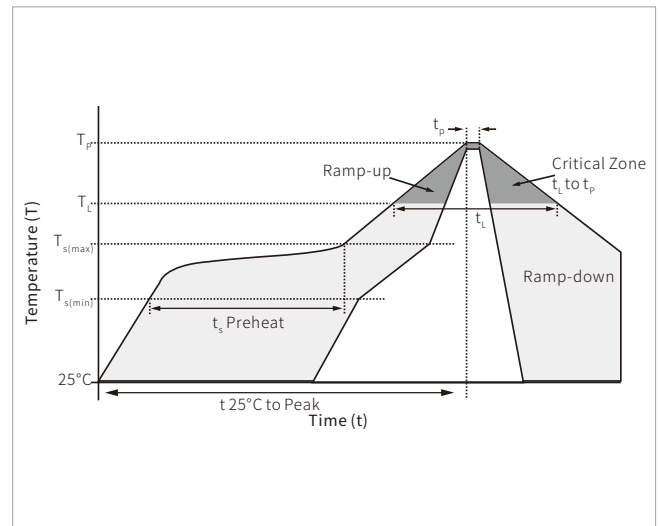
| Symbol | Parameter | Condition | Min. | Typ. | Max. | Unit |
|-----------|--------------------------------|---------------------------|------|------|------|------|
| V_{RWM} | Reverse Stand-off Voltage | | | | 24 | V |
| V_{BR} | Reverse Breakdown Voltage | $I_T=1mA$ | 26 | 30 | | V |
| V_h | Holding Voltage | $I_T=100mA$ | 2 | 2.9 | | V |
| I_R | Reverse Leakage Current | $V_{RWM}=24V$ | | | 0.2 | μA |
| V_C | Clamping Voltage | $I_{PP}=1A, tp=8/20\mu s$ | | 4 | | V |
| V_C | Clamping Voltage | $I_{PP}=5A, tp=8/20\mu s$ | | 6 | 8 | V |
| V_C | Clamping Voltage (ESD=8KV) | TLP=16A | | 8.2 | | V |
| I_{PP} | Peak Pulse Current | tp=8/20μs | | 5 | | A |
| C_J | Off State Junction Capacitance | $V_R=0V, f=1MHz$ | | 0.5 | 0.7 | pF |

CHARACTERISTIC CURVES

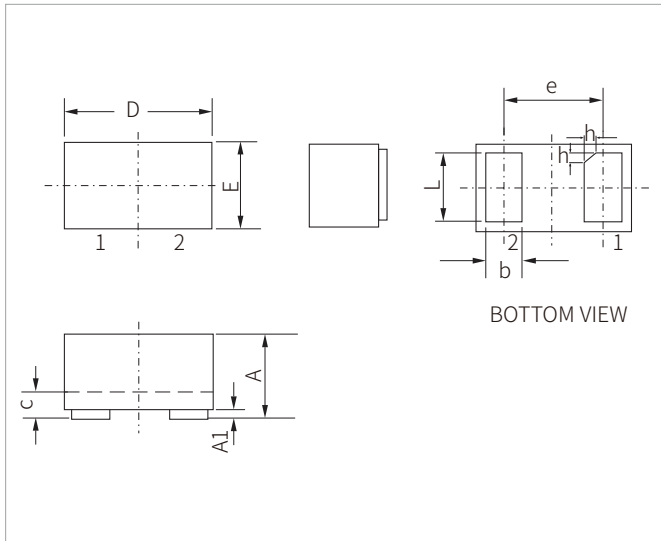


SOLDERING PARAMETERS

| 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_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 |

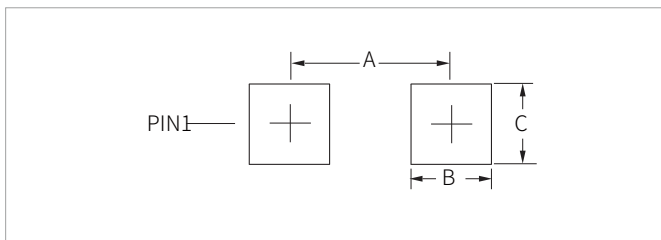


DFN0603 PACKAGE INFORMATION



| Ref. | Millimeters | | Inches | |
|------|-------------|------|----------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.28 | 0.36 | 0.011 | 0.014 |
| A1 | 0 | 0.05 | 0 | 0.002 |
| b | 0.13 | 0.24 | 0.005 | 0.009 |
| c | 0.05 | 0.15 | 0.002 | 0.006 |
| D | 0.55 | 0.70 | 0.022 | 0.028 |
| e | 0.35BSC | | 0.014BSC | |
| E | 0.25 | 0.35 | 0.010 | 0.014 |
| L | 0.20 | 0.30 | 0.008 | 0.012 |
| h | 0 | 0.10 | 0 | 0.004 |

RECOMMENDED PAD LAYOUT DIMENSIONS



| Ref. | Millimeters | Inches |
|------|-------------|--------|
| A | 0.38 | 0.015 |
| B | 0.23 | 0.009 |
| C | 0.30 | 0.012 |

ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|--------------|-------------------|----------|-----------|
| SE06F10B24UA | DFN0603 | 10000PCS | 7" |

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