

FEATURES

- | 2400W Peak Pulse Power per Line (tp=8/20μs)
- | Uni-directional configurations
- | Low clamping voltage
- | Low leakage current
- | Response Time is Typically < 1 ns
- | Solid-state silicon-avalanche technology

APPLICATIONS

- | Handsets and Accessories
- | Personal Digital Assestants(PDA's)
- | Portable Instrumentation
- | Noetebooks,Desktops,and Servers
- | Industrial equipment



DFN1610



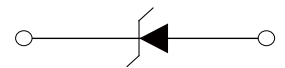
Marking

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

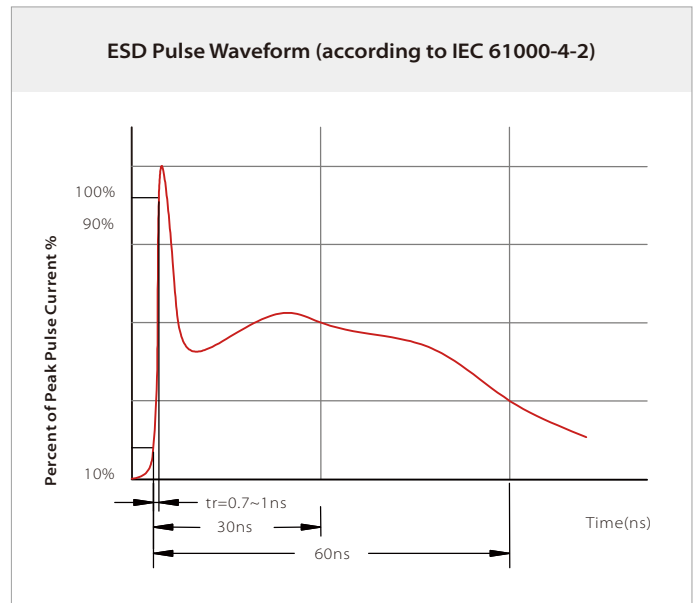
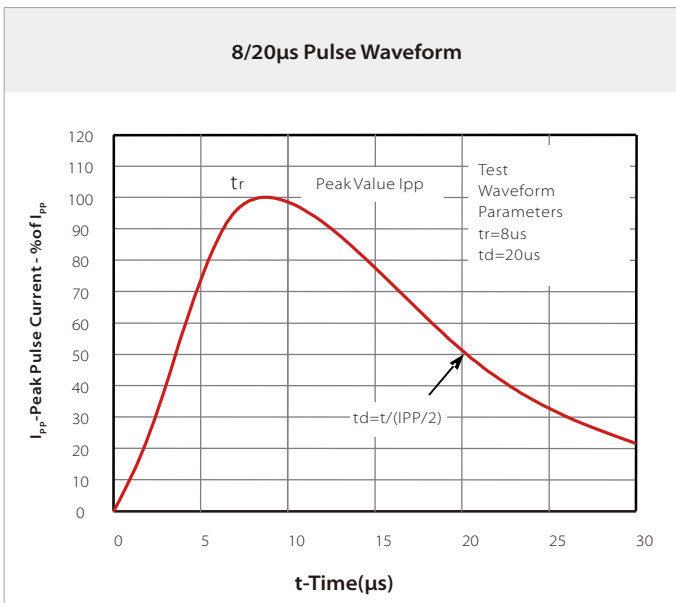
THERMAL CONSIDERATIONS

| Symbol | Parameter | Value | Unit |
|-----------|---------------------------------------|-------------|-------|
| P_{PP} | Peak Pulse Power (tp=8/20μs waveform) | 2400 | Watts |
| T_J | Operating Temperature Range | -55 to +125 | °C |
| T_{STG} | Storage Temperature Range | -55 to +125 | °C |

ELECTRICAL CHARACTERISTICS

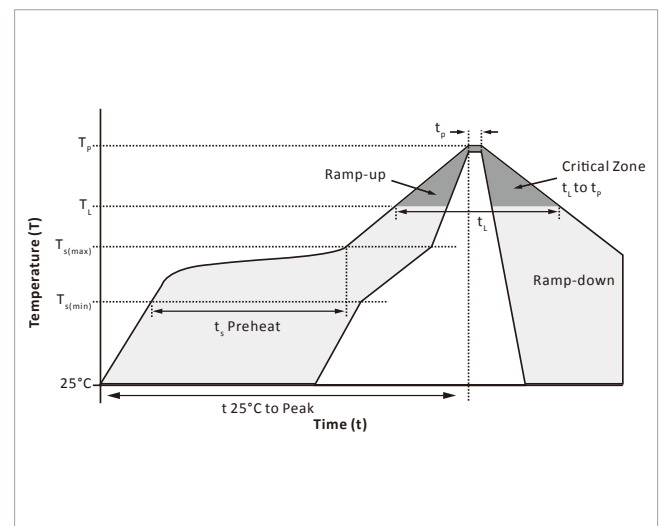
| Symbol | Parameter | Condition | Min. | Typ. | Max. | Unit |
|-----------|--------------------------------|--------------------------|------|-------|------|------|
| V_{RWM} | Reverse Stand-off Voltage | | | | 24 | V |
| V_{BR} | Reverse Breakdown Voltage | $I_T=1mA$ | 26.7 | | | V |
| I_R | Reverse Leakage Current | $V_{RWM}=24V, T=25°C$ | | | 1 | μA |
| V_F | Forward Voltage | $I_F=10mA$ | | | 1.2 | V |
| V_C | Clamping Voltage (Tp=8/20us) | $I_{PP}=80A, tp=8/20us$ | | 28 | 30 | V |
| V_C | ESD Clamping Voltage | $I_{TLP}=16A, tp=100ns$ | | 31 | | V |
| R_{DYN} | ESD Dynamic resistance | $T_{amb}=25°C, tp=100ns$ | | 0.065 | | Ω |
| I_{PP} | Peak Pulse Current (Tp=8/20us) | tp=8/20us | | | 80 | A |
| C_J | Off State Junction Capacitance | $V_R=0V, f=1MHz$ | | 218 | 230 | pF |

CHARACTERISTIC CURVES

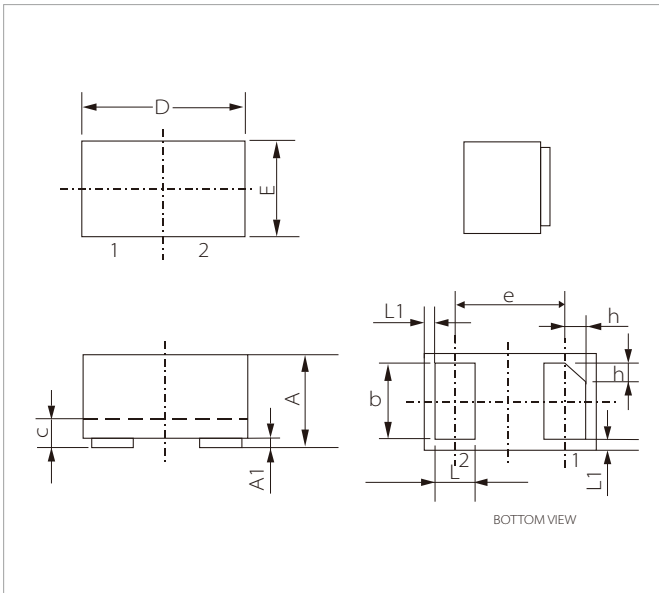


SOLDERING PARAMETERS

| 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 |

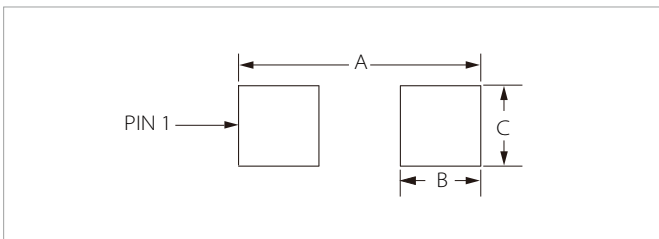


DFN1610 PACKAGE INFORMATION



| DIM | Millimeters | | Inches | |
|-----|-------------|------|----------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.45 | 0.55 | 0.018 | 0.022 |
| A1 | 0 | 0.05 | 0 | 0.002 |
| b | 0.75 | 0.85 | 0.030 | 0.033 |
| c | 0.10 | 0.20 | 0.004 | 0.008 |
| D | 1.55 | 1.65 | 0.061 | 0.065 |
| e | 1.10TYP | | 0.043TYP | |
| E | 0.95 | 1.05 | 0.037 | 0.041 |
| L | 0.35 | 0.45 | 0.014 | 0.018 |
| L1 | 0.05REF | | 0.002REF | |
| h | 0.15 | 0.25 | 0.006 | 0.010 |

RECOMMENDED PAD LAYOUT DIMENSIONS



| item | Millimeters | Inches |
|------|-------------|--------|
| A | 1.85 | 0.073 |
| B | 0.625 | 0.025 |
| C | 1.00 | 0.039 |

ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|--------------|-------------------|----------|-----------|
| SE16F240U24A | DFN1610 | 10000PCS | 7" |

Headquarters

No.3387 Shendu Road Pujiang
I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

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Website



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