

1 Characteristics

Table 1. Absolute maximum ratings ($T_{amb} = 25\text{ °C}$)

| Symbol | Parameter | | Value | Unit |
|----------------|---|--|-------------|------|
| V_{PP} | Peak pulse voltage | IEC 61000-4-2 contact discharge IEC 61000-4-2 air discharge | 15 30 | kV |
| $P_{PP}^{(1)}$ | Peak pulse power dissipation (8/20 μ s) I/O to GND | | 90 | W |
| I_{PP} | Peak pulse current (8/20 μ s) I/O to GND | | 5 | A |
| T_j | Maximum junction temperature range | | -55 to +150 | °C |
| T_{stg} | Storage temperature range | | -65 to +150 | °C |
| T_L | Maximum lead temperature for soldering during 10 s | | 260 | °C |

1. For a surge greater than the maximum values, the diode will fail in short-circuit.

Figure 2. Electrical characteristics (definitions)

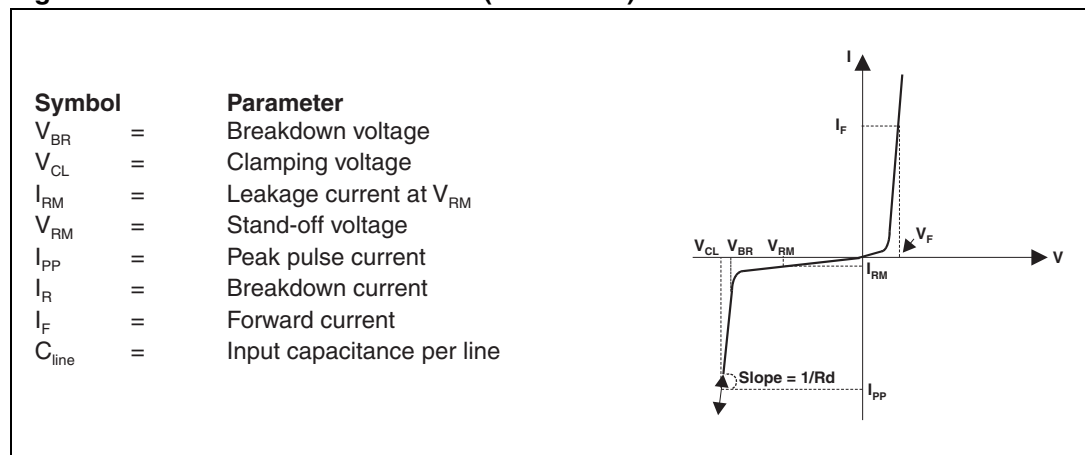


Table 2. Electrical characteristics (values, $T_{amb} = 25\text{ °C}$)

| Symbol | Test condition | Min. | Typ. | Max. | Unit |
|------------|---|------|------|------|------|
| V_{BR} | $I_R = 1\text{ mA}$ | 6 | | | V |
| I_{RM} | $V_{RM} = 3\text{ V}$, I/O to GND | | | 10 | nA |
| | $V_{RM} = 1\text{ V}$, I/O to GND | | | 1 | |
| C_{line} | $F = 1\text{ MHz}$, $V_R = 0\text{ V}$ | | | 2.5 | pF |

Figure 3. Leakage current versus junction temperature (typical values, $V_R = 1\text{ V}$)

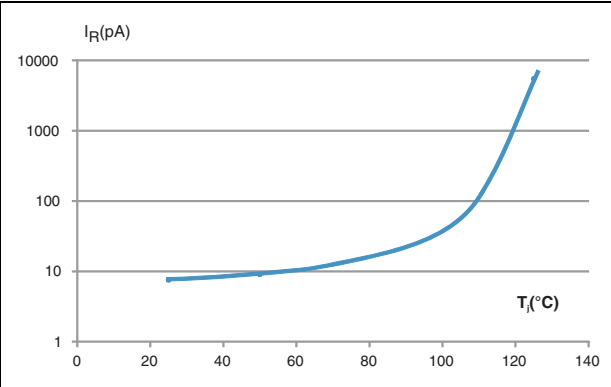


Figure 4. Leakage current versus reverse applied voltage (typical values)

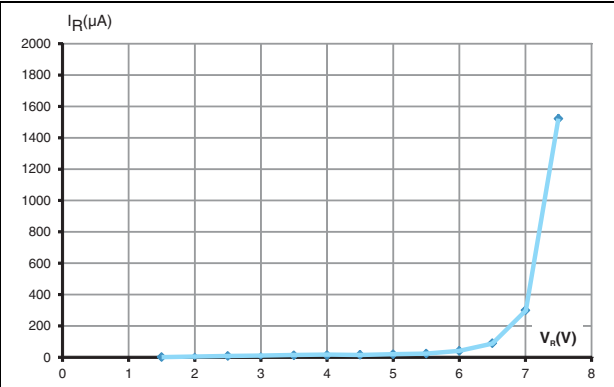


Figure 5. ESD response to IEC 61000-4-2 (+8 kV contact discharge)

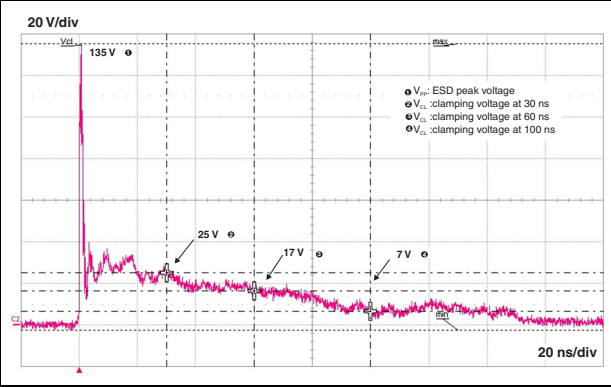


Figure 6. ESD response to IEC 61000-4-2 (-8 kV contact discharge)

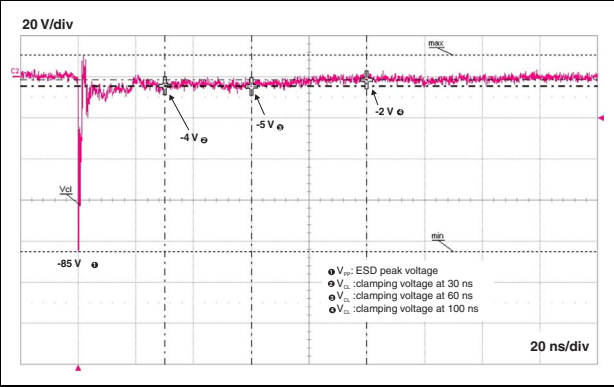
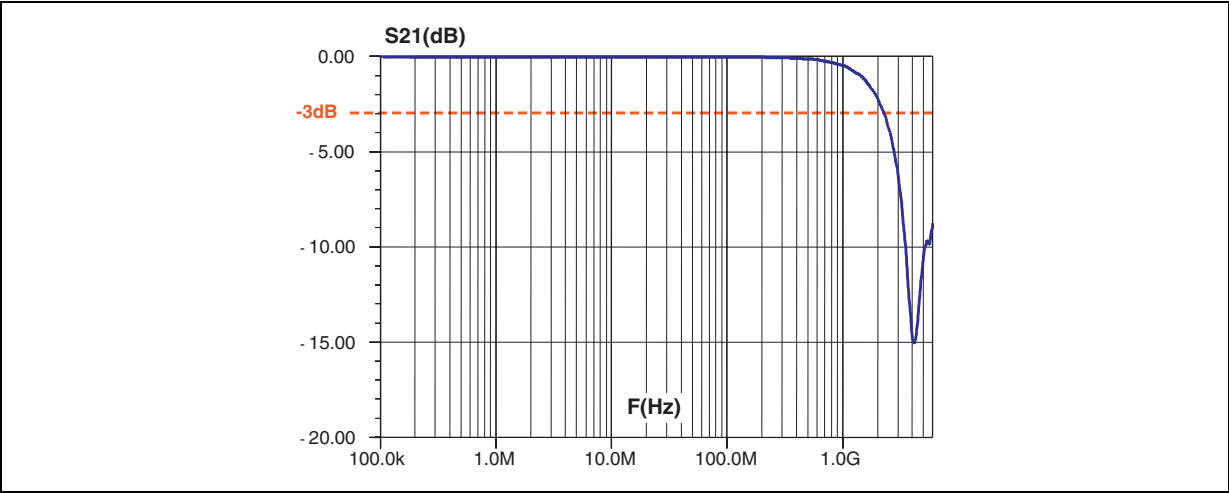
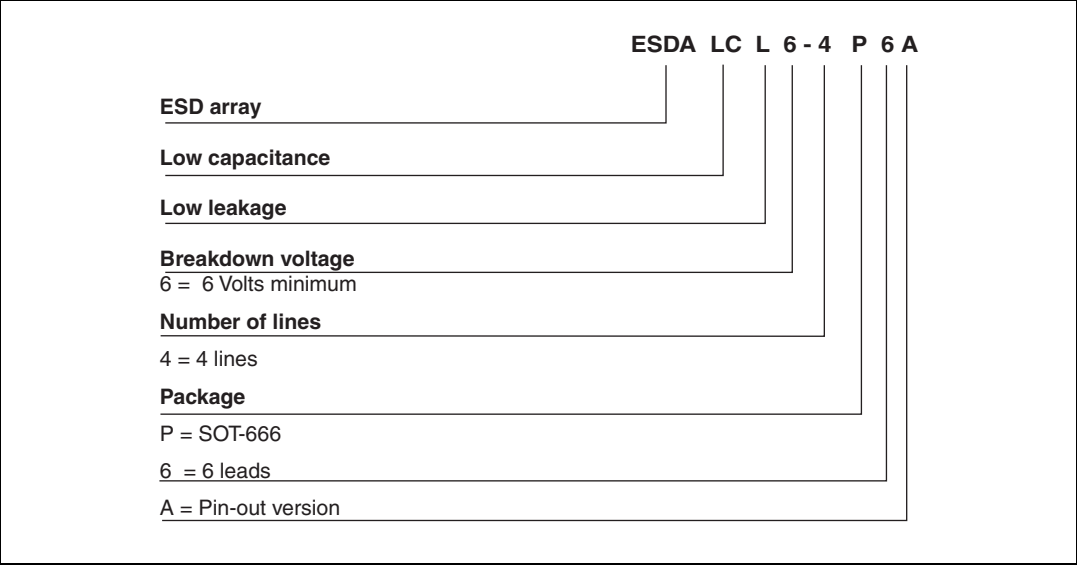


Figure 7. S21 attenuation measurement result



2 Ordering information scheme

Figure 8. Ordering information scheme



3 Package information

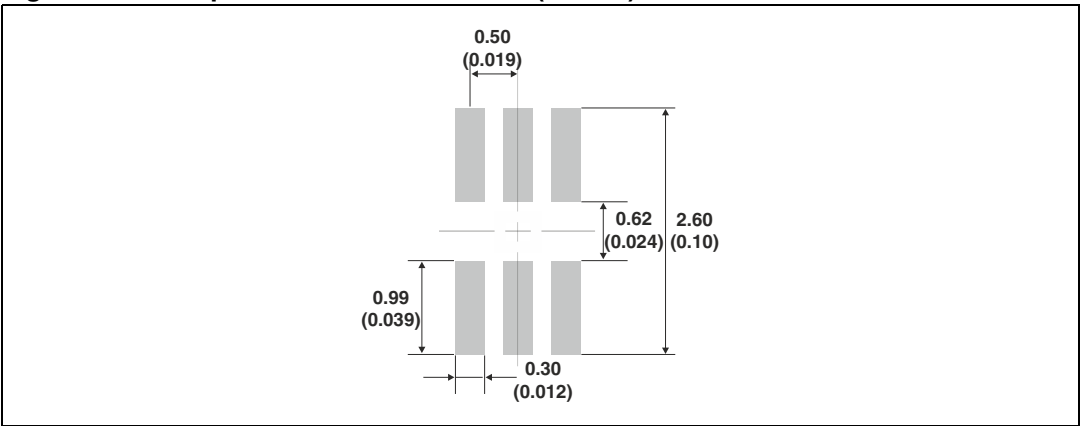
- Epoxy meets UL94, V0
- Lead-free package

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Table 3. SOT-666 dimensions

| Ref. | Dimensions | | | | | |
|------|-------------|------|------|--------|-------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 0.45 | | 0.60 | 0.018 | | 0.024 |
| A3 | 0.08 | | 0.18 | 0.003 | | 0.007 |
| b | 0.17 | | 0.34 | 0.007 | | 0.013 |
| b1 | 0.19 | 0.27 | 0.34 | 0.007 | 0.011 | 0.013 |
| D | 1.50 | | 1.70 | 0.059 | | 0.067 |
| E | 1.50 | | 1.70 | 0.059 | | 0.067 |
| E1 | 1.10 | | 1.30 | 0.043 | | 0.051 |
| e | | 0.50 | | | 0.020 | |
| L1 | | 0.19 | | | 0.007 | |
| L2 | 0.10 | | 0.30 | 0.004 | | 0.012 |
| L3 | | 0.10 | | | 0.004 | |

Figure 9. Footprint - dimensions in mm (inches)



4 Ordering information

Table 4. Ordering information

| Order code | Marking ⁽¹⁾ | Package | Weight | Base qty | Delivery mode |
|---------------|------------------------|---------|--------|----------|---------------|
| ESDALCL6-4P6A | S | SOT-666 | 2.9 mg | 3000 | Tape and reel |

1. The marking can be rotated by multiples of 90° to differentiate assembly location

5 Revision history

Table 5. Document revision history

| Date | Revision | Changes |
|-------------|----------|------------------|
| 30-Oct-2012 | 1 | Initial release. |

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