

SOT-353 Plastic-Encapsulate Diodes

UMN1N SWITCHING DIODE

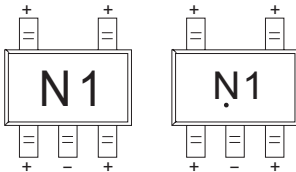
FEATURES

- Multiple Diodes in One Small Surface Mount Package
- Diode Characteristics are Matched in the Package

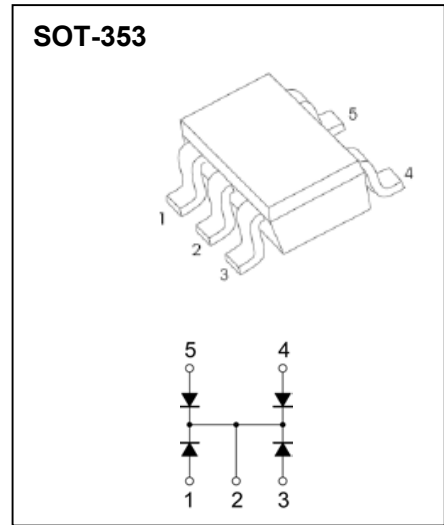
APPLICATIONS

- High Speed Switching

MARKING: N1



Solid dot = Green molding compound device,
if none, the normal device.



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

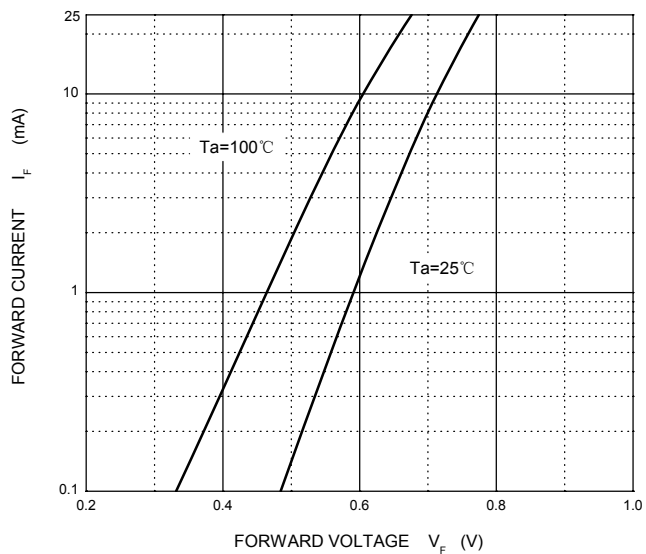
| Symbol | Parameter | Value | Unit |
|-----------------|---|----------|--------------------|
| V_R | Continuous Reverse Voltage | 80 | V |
| I_O | Continuous Forward Current | 25 | mA |
| I_{FM} | Peak Forward Current | 80 | mA |
| I_{FSM} | Non-repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$ | 0.25 | A |
| P_D | Power Dissipation | 150 | mW |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient | 833 | $^\circ\text{C/W}$ |
| T_J, T_{stg} | Operation Junction and Storage Temperature Range | -55~+150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS($T_a=25^\circ\text{C}$ unless otherwise specified)

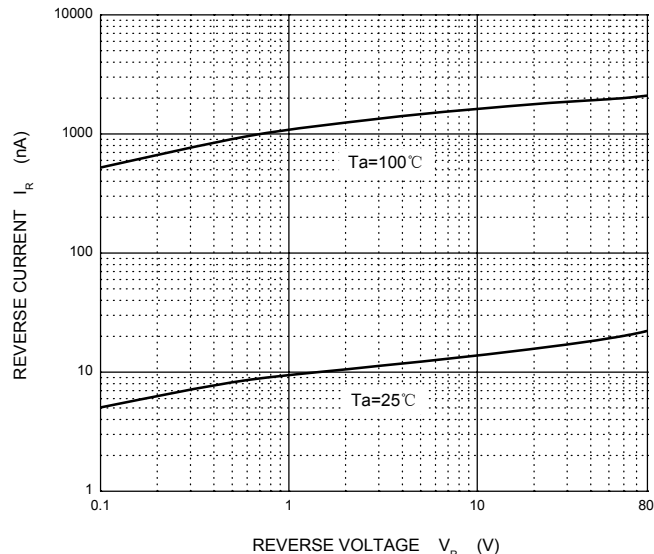
| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|-----------------------|------------|---|-----|-----|-----|---------------|
| Reverse voltage | $V_{(BR)}$ | $I_R=100\mu\text{A}$ | 80 | | | V |
| Reverse current | I_R | $V_R=70\text{V}$ | | | 0.1 | μA |
| Forward voltage | V_F | $I_F=5\text{mA}$ | | | 0.9 | V |
| Total capacitance | C_{tot} | $V_R=6\text{V}, f=1\text{MHz}$ | | | 3.5 | pF |
| Reverse recovery time | t_{rr} | $I_F=I_R=5\text{mA}, V_R=6\text{V}, R_L=50\Omega$ | | | 4 | ns |

Typical Characteristics

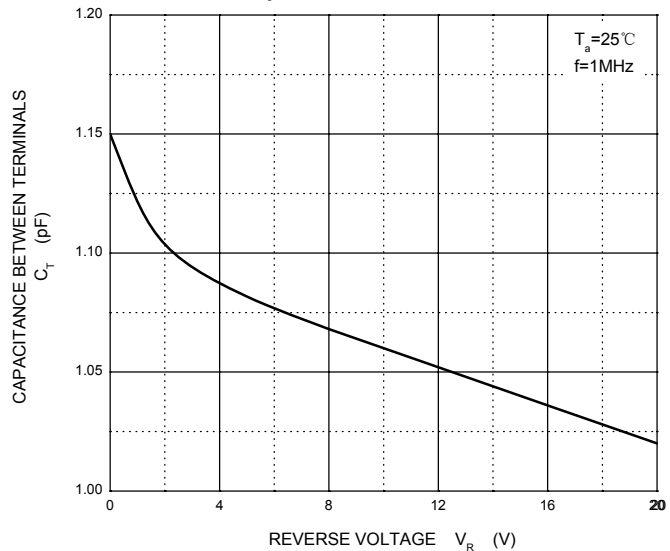
Forward Characteristics



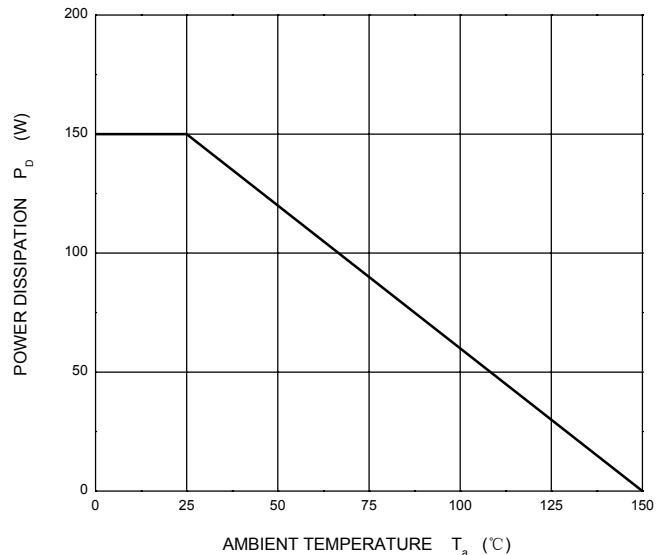
Reverse Characteristics



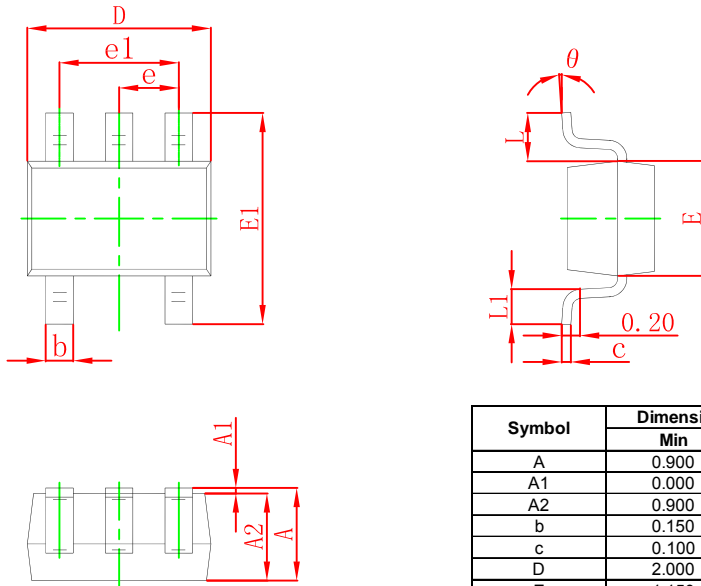
Capacitance Characteristics



Power Derating Curve

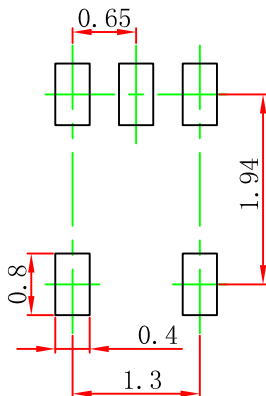


SOT-353 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.100 | 0.035 | 0.043 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.000 | 0.035 | 0.039 |
| b | 0.150 | 0.350 | 0.006 | 0.014 |
| c | 0.100 | 0.150 | 0.004 | 0.006 |
| D | 2.000 | 2.200 | 0.079 | 0.087 |
| E | 1.150 | 1.350 | 0.045 | 0.053 |
| E1 | 2.150 | 2.400 | 0.085 | 0.094 |
| e | 0.650 TYP | | 0.026 TYP | |
| e1 | 1.200 | 1.400 | 0.047 | 0.055 |
| L | 0.525 REF | | 0.021 REF | |
| L1 | 0.260 | 0.460 | 0.010 | 0.018 |
| theta | 0° | 8° | 0° | 8° |

SOT-353 Suggested Pad Layout



Note:

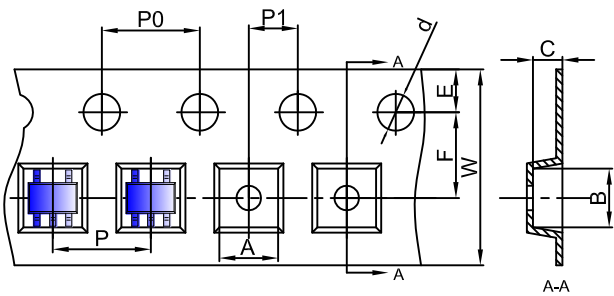
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

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SOT-353 Tape and Reel

SOT-353 Embossed Carrier Tape

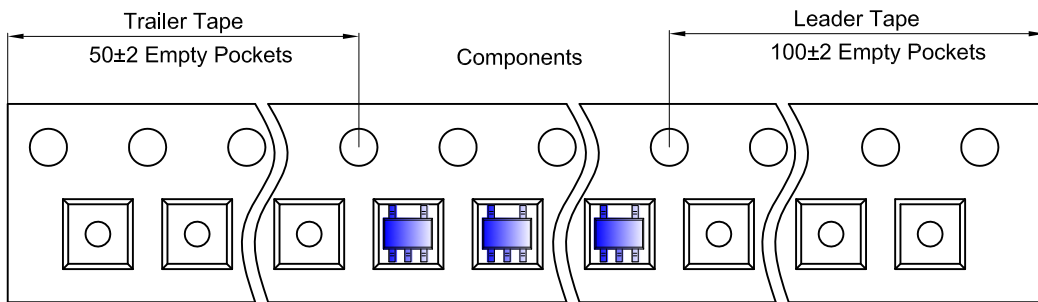


Packaging Description:

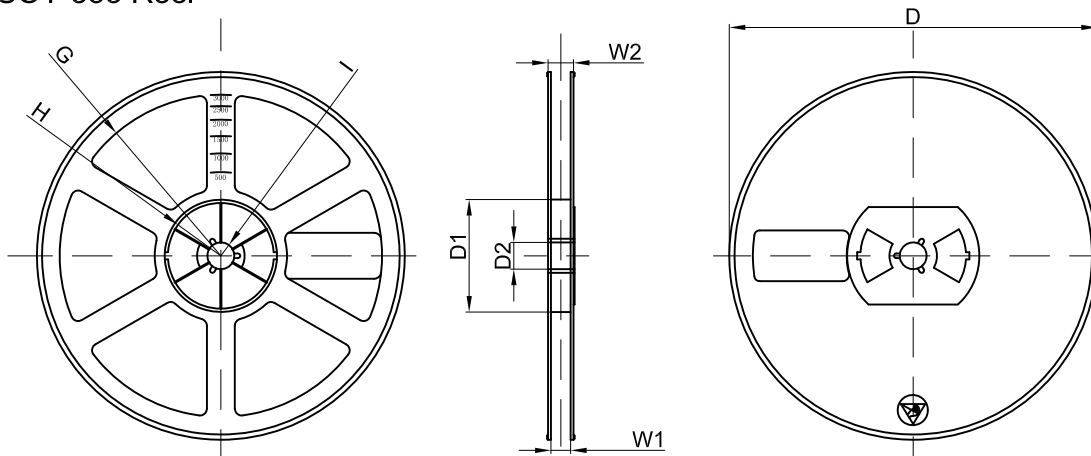
SOT-353 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

| Dimensions are in millimeter | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type | A | B | C | d | E | F | P0 | P | P1 | W |
| SOT-353 | 2.25 | 2.55 | 1.20 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOT-353 Tape Leader and Trailer



SOT-353 Reel



| Dimensions are in millimeter | | | | | | | | |
|------------------------------|---------|-------|-------|--------|--------|-------|------|-------|
| Reel Option | D | D1 | D2 | G | H | I | W1 | W2 |
| 7" Dia | Ø178.00 | 54.40 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

| REEL | Reel Size | Box | Box Size(mm) | Carton | Carton Size(mm) | G.W.(kg) |
|----------|-----------|------------|--------------|-------------|-----------------|----------|
| 3000 pcs | 7 inch | 45,000 pcs | 203×203×195 | 180,000 pcs | 438×438×220 | |

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