

SOT-353 Plastic-Encapsulate Transistors

UML2N Isolated Transistor and Diode

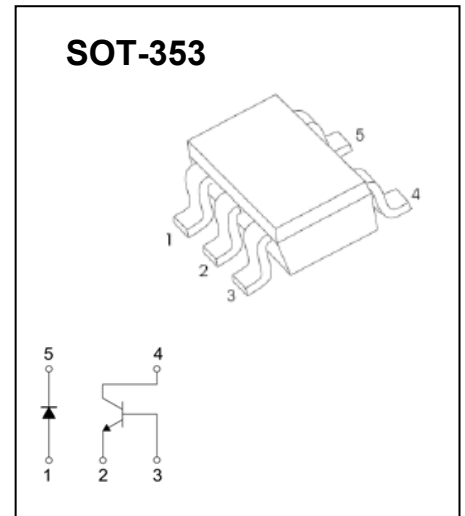
Features

- The 2SC2412K and a diodes are housed independently In a package

MARKING: L2

TR MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

| Symbol | Parameter | Value | Units |
|-----------------------------------|--|-----------|-------|
| V _{CB0} | Collector-Base Voltage | 60 | V |
| V _{CE0} | Collector-Emitter Voltage | 50 | V |
| V _{EB0} | Emitter-Base Voltage | 6 | V |
| I _C | Collector Current -Continuous | 150 | mA |
| P _C | Collector Power Dissipation | 150 | mW |
| T _J , T _{stg} | Operation Junction and Storage Temperature Range | -55 ~+150 | °C |



DIO Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

| Parameter | Symbol | Limits | Unit |
|--|-----------------------------------|----------|------|
| DC reverse voltage | V _R | 80 | V |
| Peak Reverse Voltage | V _{RM} | 80 | V |
| Forward Continuous Current | I _{FM} | 300 | mA |
| Average Rectified Output Current | I _O | 100 | mA |
| Surge current | I _{SURGE} | 4 | A |
| Operation Junction and Storage Temperature Range | T _J , T _{STG} | -55~+150 | °C |

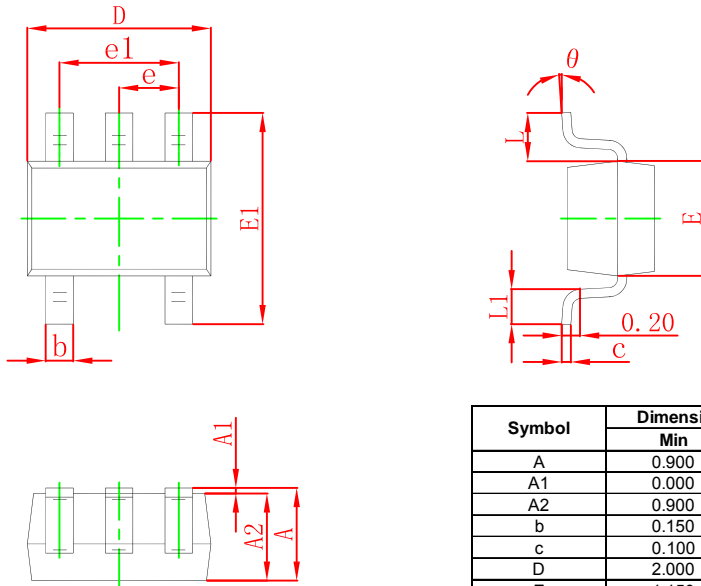
TR ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---------------------------------|-----|-----|-----|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=50\mu A, I_E=0$ | 60 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=1mA, I_B=0$ | 50 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=50\mu A, I_C=0$ | 6 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=60V, I_E=0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=5V, I_C=0$ | | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE}=6V, I_C=1mA$ | 120 | | 560 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=50mA, I_B=5mA$ | | | 0.4 | V |
| Transition frequency | f_T | $V_{CE}=12V, I_C=2mA, f=100MHz$ | | 180 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=12V, I_E=0, f=1MHz$ | | | 3.5 | pF |

DIO Electrical Ratings @Ta=25°C

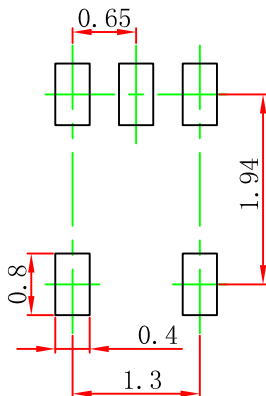
| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|-------------------------------|----------|------|------|------|---------|--------------------------------------|
| Forward voltage | V_F | | | 1.2 | V | $I_F=100mA$ |
| Reverse current | I_R | | | 0.1 | μA | $V_R=70V$ |
| Capacitance between terminals | C_T | | | 3.5 | pF | $V_R=6V, f=1MHz$ |
| Reverse Recovery Time | t_{rr} | | | 4 | ns | $V_R=6V,$ $I_F=5mA, R_L=50\Omega$ |

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 |
| θ | 0° | 8° | 0° | 8° |

SOT-353 Suggested Pad Layout



Note:

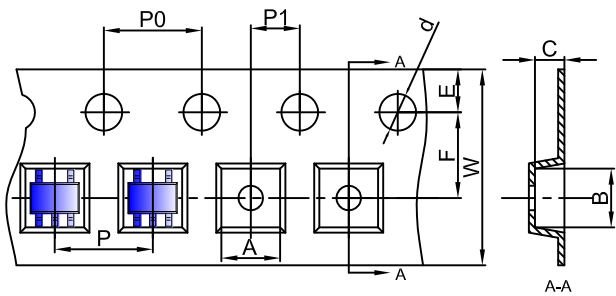
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

SOT-353 Tape and Reel

SOT-353 Embossed Carrier Tape

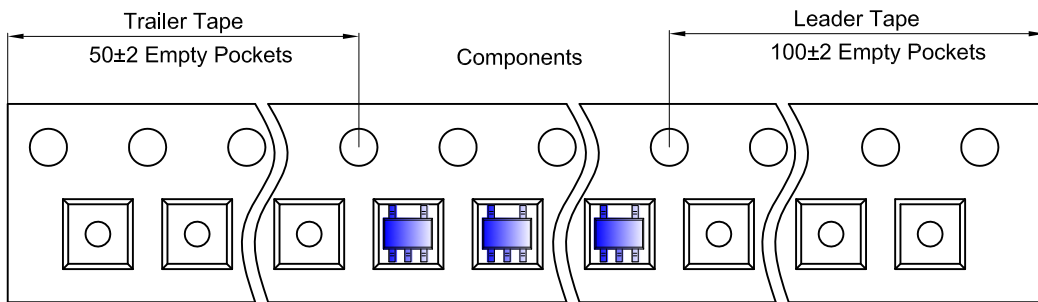


Packaging Description:

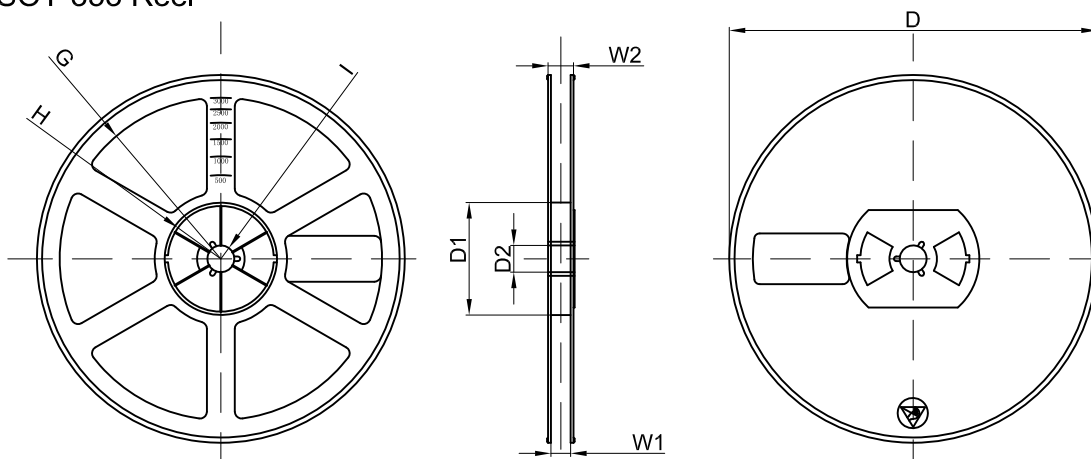
SOT-353 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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 | |