

HIGH FREQUENCY MAGNETICS

T1/E1 Miniature Surface Mount Transformers

TM00144

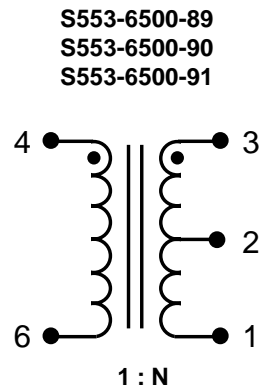
- Meets pulse template and return loss requirements of T1/E1 Interface circuits
- Minimum interwinding breakdown voltage of 1500 Vrms
- Operating Temperature Range: -40° C to +85° C
- Meets IEC 695, 2-2 flammability requirements
- PWB Process Capability: Standard Printed Wiring Board assembly techniques, total-immersion cleaning
- Reliability testing: Shock, vibration, temperature cycling, temperature - humidity - bias

ELECTRICAL SPECIFICATIONS at 25° C

| Part Number | Turns Ratio | Inductance ¹ | Leakage Inductance ² | DCR | | Interwinding Capacitance | Surge Voltage Capability ³ | |
|--------------|-------------------|-------------------------|---------------------------------|---------|---------|--------------------------|---------------------------------------|--------------|
| | (4 - 6) : (3 - 1) | (4 - 6) | (4 - 6) | (4 - 6) | (3 - 1) | | Metallic | Longitudinal |
| | ± 1% | mH min | μH max | Ω max | Ω max | | V peak | V peak |
| S553-6500-89 | 1 : 1CT | 1.6 | 1.2 | 1.7 | 1.8 | 45 max | 3000 | 2500 |
| S553-6500-90 | 1 : 1.14CT | 1.6 | 0.8 | 2.1 | 2.5 | 35 typ | 2500 | 2500 |
| S553-6500-91 | 1 : 1.35CT | 1.3 | 0.8 | 1.9 | 2.5 | 35 typ | 2500 | 2500 |

1. measured at 10 kHz, 0.1 Vac
2. measured at 100 kHz, 0.1 Vac
3. See Supplementary Information

SCHEMATIC

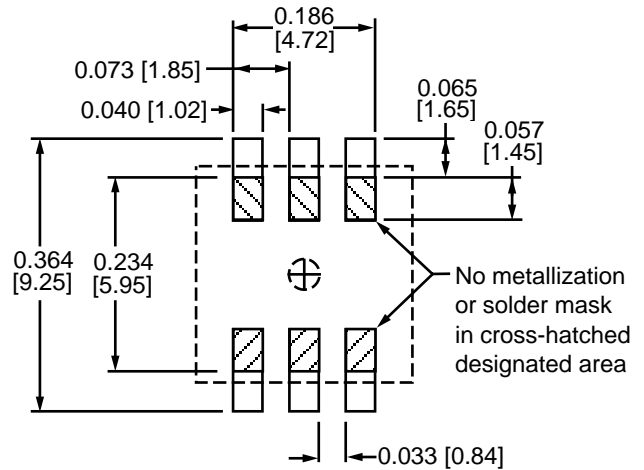
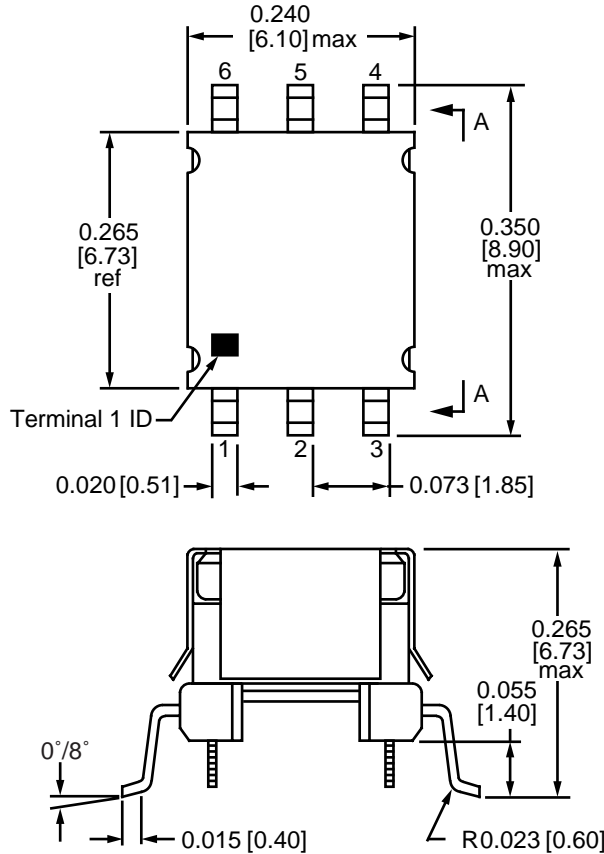


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MECHANICAL

S553-6500-89
S553-6500-90
S553-6500-91



Suggested PCB Pad Layout

Note: Unless otherwise specified, dimensions are nominal and in inches [millimeters].

Supplementary Information

| | |
|-----------------------------|---|
| Safety Agency Compatibility | Underwriters Laboratories, Inc. UL 1950 |
| Surge Voltage Capability | 10/700 μ s; 10 repetitions of alternating polarity, generator output: peak voltage, 25 Ω source |
| Flammability Compliance | IEC-695, 2-2 (needle flame test), materials are UL 94 VO approved |
| Simulation Model | SPICE computer simulation file available on request |
| Surface-Mount Packaging | Tape and Reel; 16 mm wide by 12 mm pitch; 13 inch OD; 4 inch ID 650 transformers per reel, maximum Meets ANSI/EIA 481-2 Carrier Tape Standards—JEDEC SO package |
| Terminal Lead Coplanarity | 0.004 inch [0.10 mm] |
| PWB Process Capability | Machine placement (recommendation: locate by terminals, not body) |

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