MIL-STD-1553 TRANSFORMERS

Low Profile 3.3V Pulse Transformers
Ruggedized

These Non-QPL interface transformers are built and tested in AS9100/ISO 9001 approved facilities.

- Designed for transceivers utilizing a single supply voltage to 3.3V
- Single transformer package
- Dual Ratio
- Max Reflow Temperature: 225°C
- Moisture Sensitivity Level:
  - Q1553: Level 1
  - SMQ1553, GL1553, DGL1553: Level 3
- Applicable Standards:
  - MIL-STD-1553B
  - MIL-PRF-21038
  - MIL-STD-202

Summary Performance Specifications

Droop	20% MAX
Overshoot	±1V MAX
Common Mode Rejection (CMR)	45dB MIN
Frequency Range (no load)	75kHz - 1MHz
Operating & Storage Temperature Range	-55°C to +125°C
Weight	5 grams MAX
Insulation Resistance	10K MΩ MIN @ 250Vdc
Dielectric Withstanding Voltage	100Vrms

Electrical Specifications @ 25°C

Part Number	Terminals	Ratio (±3%)	RDC (Ω MAX)	Impedance (Ω MIN)
Q1553-70	1-3:4-8 1-3:5-7	1CT:3CT 1CT:2.15CT	1-3 = 0.35 4-8 = 3.50	4-8 4000
Q1553-71	1-3:4-8 1-3:5-7	1CT:3.54CT 1CT:2.50CT	1-3 = 0.35 4-8 = 3.50	4-8 4000
SMQ1553-70	1-3:4-8 1-3:5-7	1CT:3CT 1CT:2.15CT	1-3 = 0.35 4-8 = 3.50	4-8 4000
SMQ1553-71	1-3:4-8 1-3:5-7	1CT:3.54CT 1CT:2.50CT	1-3 = 0.35 4-8 = 3.50	4-8 4000
GL1553-70	1-3:4-8 1-3:5-7	1CT:3CT 1CT:2.15CT	1-3 = 0.80 4-8 = 3.50	4-8 4000
GL1553-71	1-3:4-8 1-3:5-7	1CT:3.54CT 1CT:2.50CT	1-3 = 0.80 4-8 = 3.50	4-8 4000
DGL1553-70	1-3:16-13/5-7:12-9 1-3:15-14/5-7:11-10	1CT:3CT 1CT:2.15CT	1-3, 5-7 = 0.80 16-13, 12-9 = 3.50	16-13 & 12-9 4000
DGL1553-71	1-3:16-13/5-7:12-9 1-3:15-14/5-7:11-10	1CT:3.54CT 1CT:2.50CT	1-3, 5-7 = 0.80 16-13, 12-9 = 3.50	16-13 & 12-9 4000

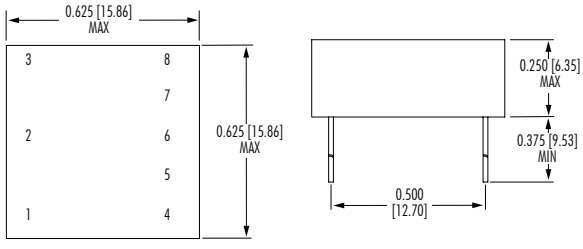
NOTES:

1. Add suffix "**NL**" for RoHS compliant version; i.e. Q1553-70 becomes **Q1553-70NL**. NL parts have 100% SN Lead Finish (MSL:4)

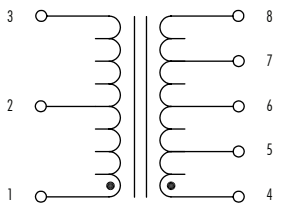
Mechanicals

Q1553

Dimensions: inch [mm]
Tolerance (unless otherwise specified): ±0.010 [0.25]



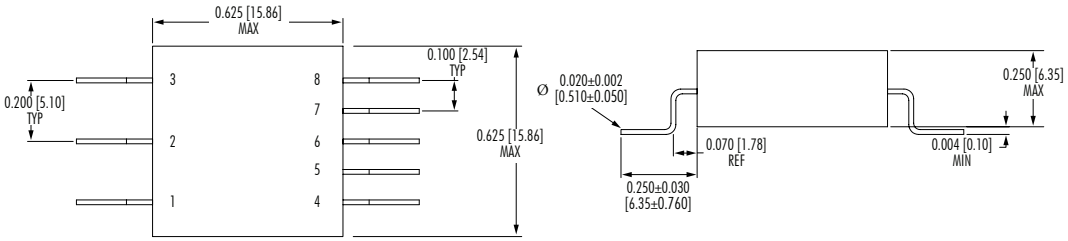
Electrical Schematics



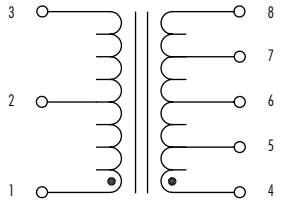
SMQ1553

Mechanicals

Dimensions: inch [mm]
Tolerance (unless otherwise specified): ±0.010 [0.25]



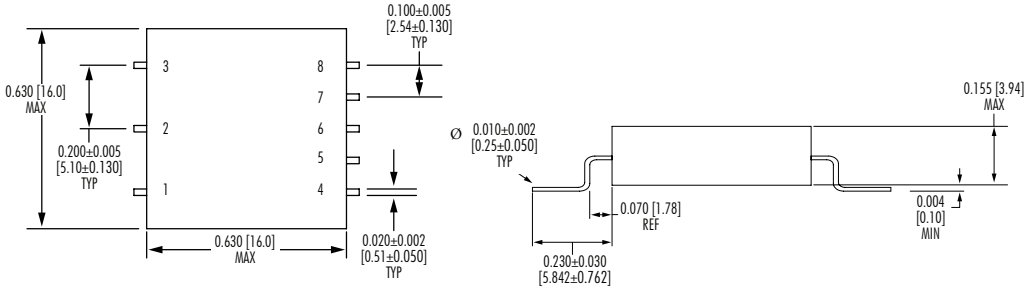
Electrical Schematics



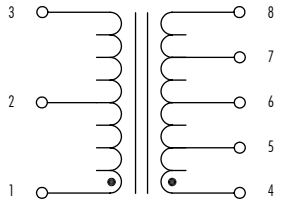
GL1553

Mechanicals

Dimensions: inch [mm]
Tolerance (unless otherwise specified): ±0.010 [0.25]



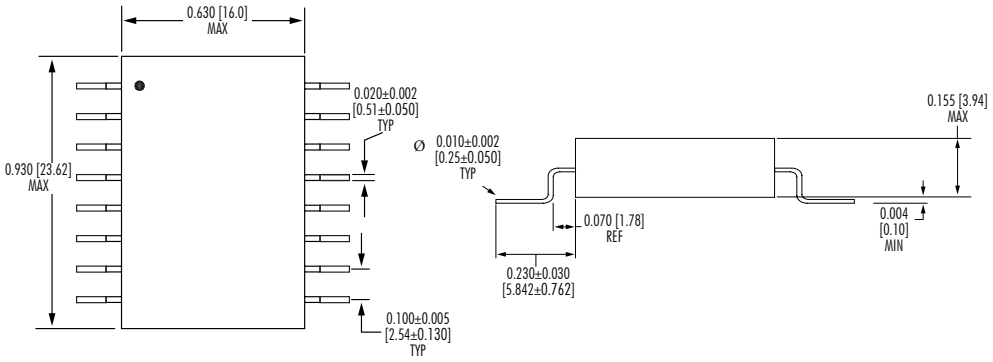
Electrical Schematics



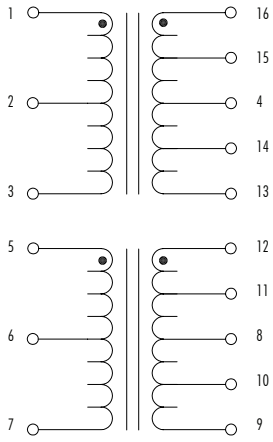
DGL1553

Mechanicals

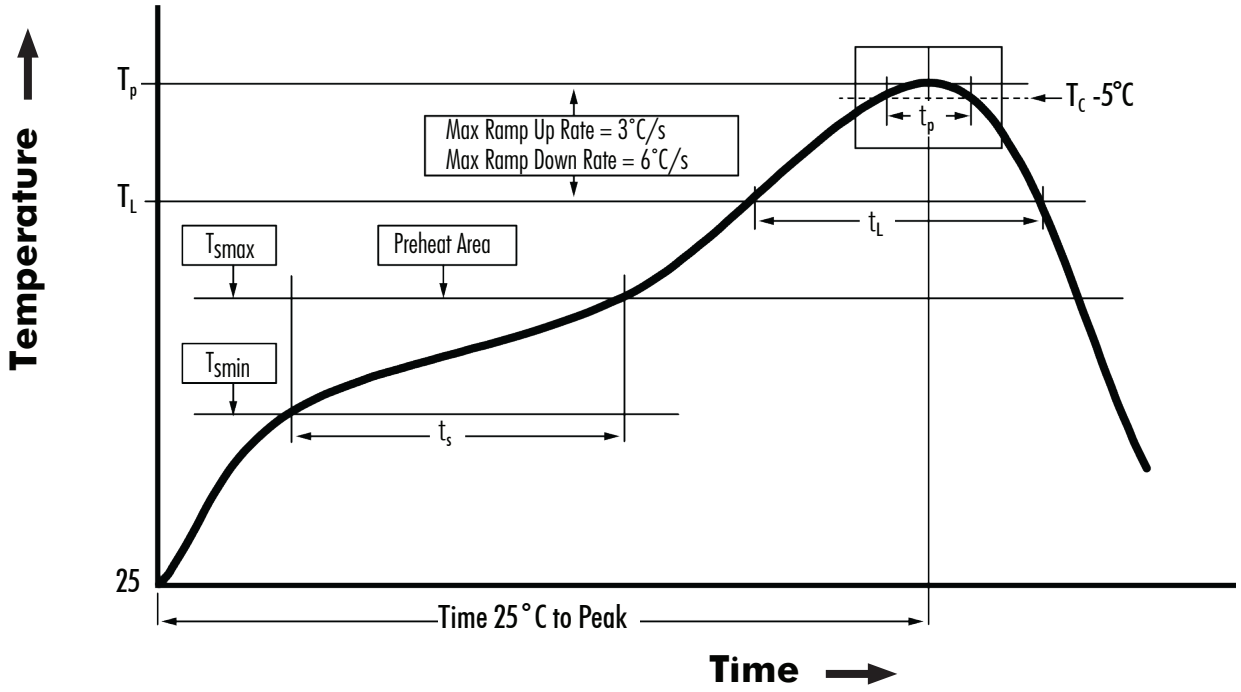
Dimensions: inch [mm]
Tolerance (unless otherwise specified): ±0.010 [0.25]



Electrical Schematics



Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



T_{SMIN} (°C)	T_{SMAX} (°C)	T_L (°C)	T_P (°C MAX)	t_S (s)	t_L (s)	t_P (s MAX)	Ramp-up rate (T_L to T_P)	Ramp-down rate (T_P to T_L)	Time 25°C to peak temperature (s MAX)
100	150	183	225	60 - 120	60 - 150	20	3°C/s MAX	6°C/s MAX	360

NOTES:

1. All temperatures measured on the package leads.
2. Maximum number of reflow cycles not to exceed 2.
3. Reflow cycle applies only to surface mount parts.

iNRCORE, LLC
311 Sinclair Road, Bristol, PA 19007-6812 USA
Tel: +1.215.781.6400 Fax: +1.215.781.6430
www.iNRCORE.com

Mouser Electronics

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