MIL-STD-1553 TRANSFORMERS

Low Profile 3.3V Pulse Transformers

Ruggedized

These Non-QPL interface transformers are built and tested in 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
- Lead Finish: Sn63/Pb37
- 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	Turns Ratio (±3%)	RDC MAX (Ω)	Impedance MIN (Ω)
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

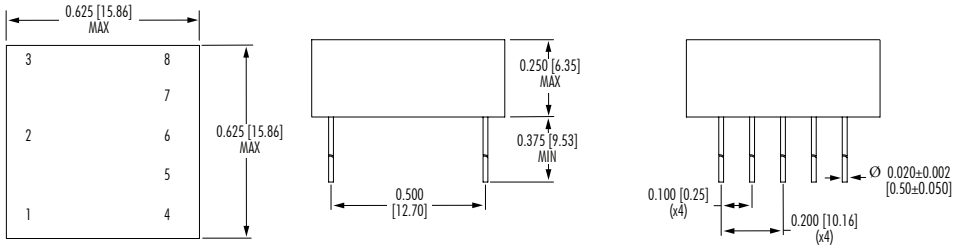
NOTES:

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

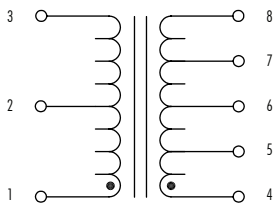
Q1553

Mechanicals

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



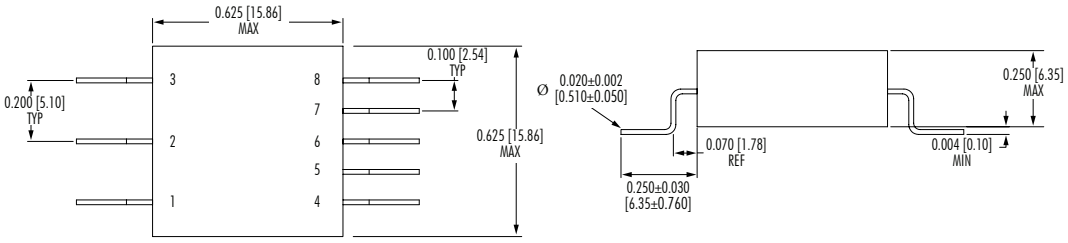
Electrical Schematics



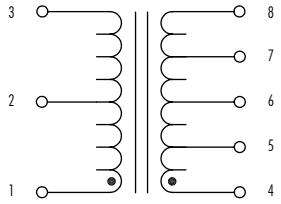
SMQ1553

Mechanicals

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



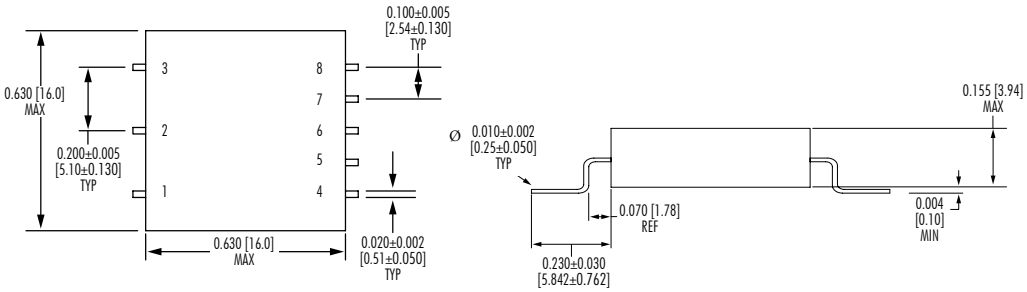
Electrical Schematics



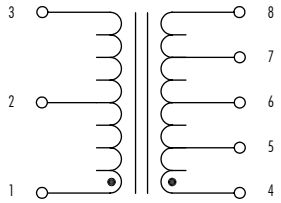
GL1553

Mechanicals

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



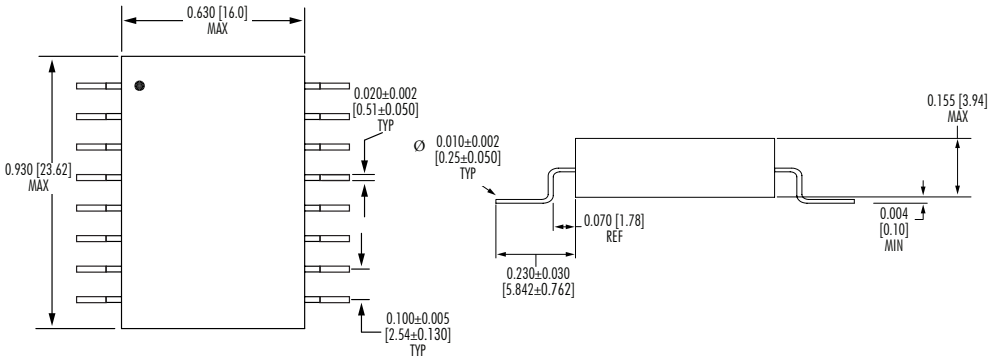
Electrical Schematics



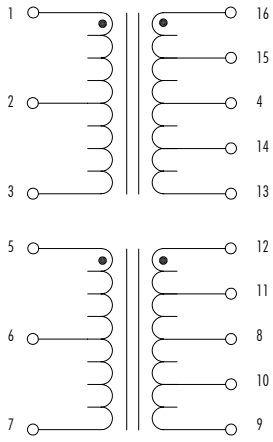
DGL1553

Mechanicals

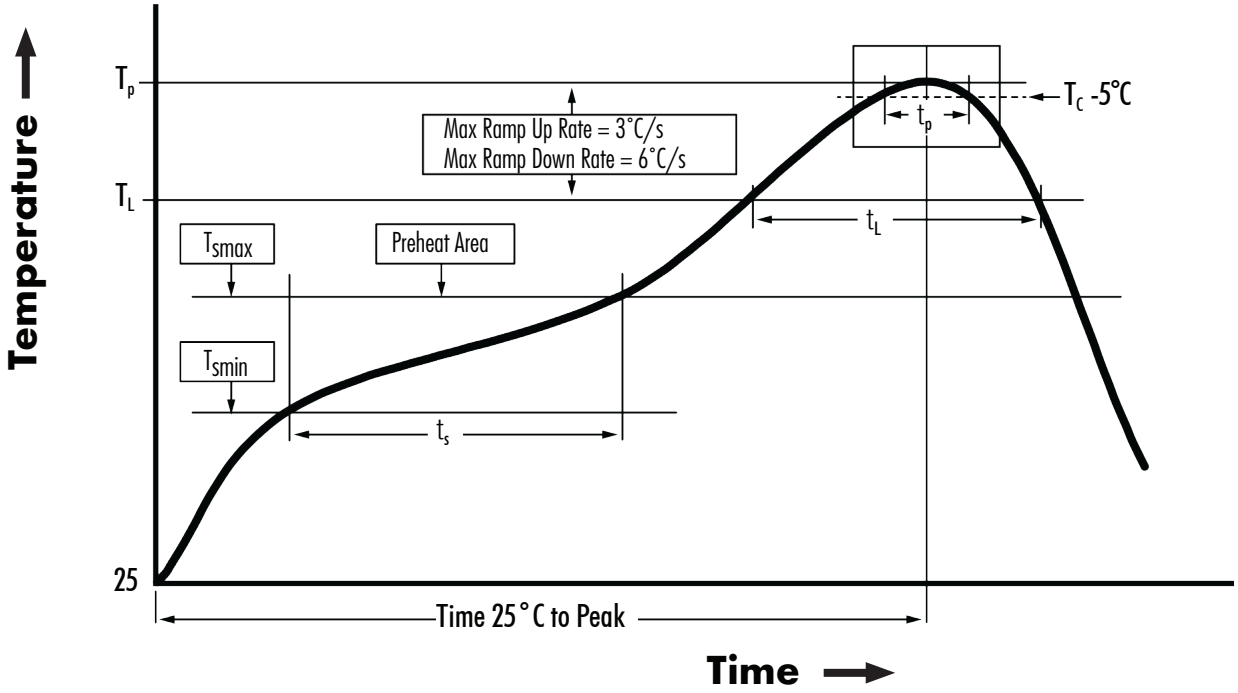
Dimensions: inch [mm]
Tolerance (unless otherwise specified): ±0.010 [0.25]



Electrical Schematics



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)
Tin/Lead Profile									
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.

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