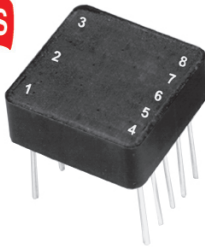


# MIL-STD-1553 Transformers

Value Series (COTS) THT non-QPL Interface Transformers.

Ruggedized

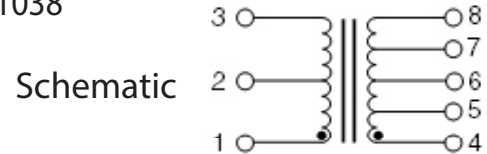


These non-QPL interface transformers are built and tested in ISO 9001 approved facilities. They conform to all electrical and physical parameters of MIL-PRF-21038/27. Choose one of three operating temperature ranges including 0° to +70°C, -40° to +85°C, or -55° to +125° C.

Operating Temp.	Prefix
0° to 70°C	C
-40° to +85°C	N
-55° to +125°C	TQ

Summary Performance Specifications	
Impedance	(see table below)
Droop	□ 20%
Overshoot	±1V MAX
Common Mode Rejection (CMR)	□ 45dB
Frequency Range (no load)	75kHz to 1MHz
Operating Temperature Range	(see table above)
Weight	□ 5 grams
Insulation Resistance (MIN)	10K MΩ @ 250Vdc
Dielectric Withstanding Voltage	100Vrms

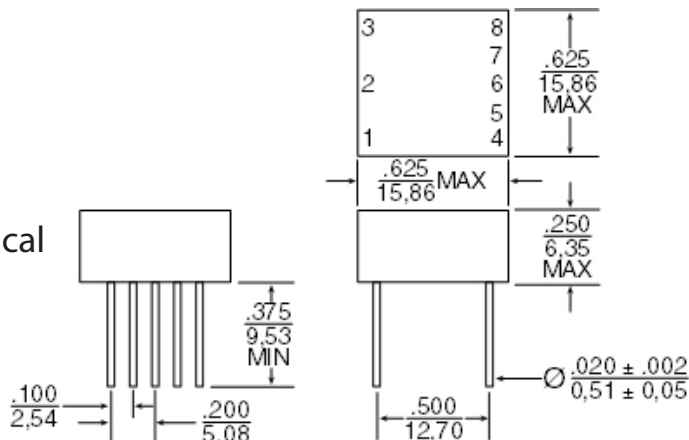
- Ⓡ Dual ratio, single interface (see schematic)
- Ⓡ Through-the-board package
- Ⓡ Moisture Sensitivity Level: 1
- Ⓡ For use in MIL-STD-1553 applications
- Ⓡ Standard height: 0.250 in.
- Ⓡ Performance to MIL-PRF-21038 requirements
- Ⓡ Built in ISO 9001 facility
- Ⓡ Applicable specifications:
  - n MIL-STD-1553B
  - n MIL-STD-202
  - n MIL-PRF-21038
  - n ISO 9001



Characteristics				
Part Number	Terminals	Ratio (±3%)	RDC (Ω MAX)	Impedance (Ω MIN)
(X)1553-1 <sup>1</sup>	1-3 : 4-8 1-3 : 5-7	1CT:1CT 1CT:.707CT	1-3 = 3.0 4-8 = 3.0	(1-3) 4,000
(X)1553-2	1-3 : 4-8 1-3 : 5-7	1.4CT:1CT 2CT:1CT	1-3 = 3.5 4-8 = 3.0	(1-3) 7,200
(X)1553-3	1-3 : 4-8 1-3 : 5-7	1.25CT:1CT 1.66CT:1CT	1-3 = 3.2 4-8 = 3.0	(1-3) 4,000
(X)1553-5 <sup>2</sup>	1-3 : 4-8 1-3 : 5-7	1CT:2.12CT 1CT:1.5CT	1-3 = 1.0 4-8 = 3.5	(4-8) 4,000
(X)1553-45 <sup>2</sup>	1-3 : 4-8 1-3 : 5-7	1CT:2.5CT 1CT:1.79CT	1-3 = 1.0 4-8 = 3.5	(4-8) 4,000

NOTE: 1. Refer to prefix table (above) to select temperature range. 2. Designed for transceivers utilizing a single supply voltage (+5V).

## Mechanical



- Notes:
1. All dimensions: in inches.
  2. Tolerances: xx = +.008
  3. All specifications and dimensions are subject to change without notice.

# MIL-STD-1553 Transformers

Value Series (COTS) THT non-QPL Interface Transformers  
Ruggedized



## MIL-PRF-21038/27 Inspection, Sampling, Testing

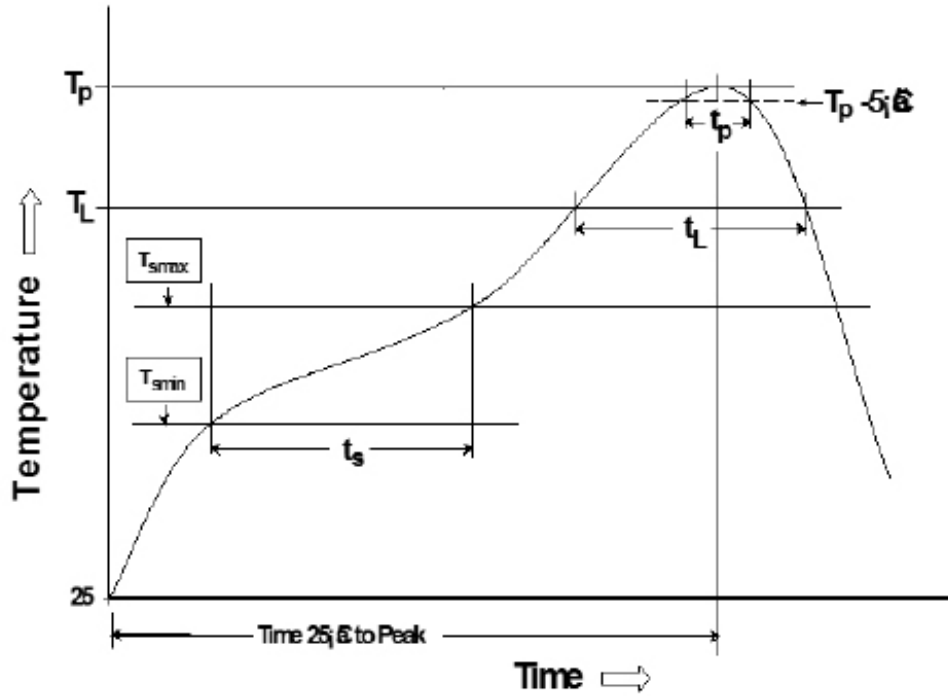
Table 1 — Group A Inspection					
Level "C"***		Level "M"		Level "T"	
Tests	Sampling Plan	Tests	Sampling Plan	Tests	Sampling Plan
N/A	N/A	Electrical Characteristics per MIL-PRF-21038/27	Sample per Table 3	Thermal Shock	100%
N/A	N/A	Visual and Mechanical Inspection	Sample per Table 3	Winding Continuity	100%
N/A	N/A	N/A	N/A	Electrical Characteristics per MIL-PRF-21038/27	100%
N/A	N/A	N/A	N/A	Impedance	Sample per Table 3
N/A	N/A	N/A	N/A	Visual and Mechanical Inspection	Sample per Table 3

Table 2 — Group B Inspection					
Level "C"***		Level "M"		Level "T"	
Tests	Sampling Plan	Tests	Sampling Plan	Tests	Sampling Plan
N/A	N/A	Dielectric Withstanding Voltage	Sample per Table 3	Dielectric Withstanding Voltage	Sample per Table 3
N/A	N/A	Insulation Resistance	Sample per Table 3	Insulation Resistance	Sample per Table 3

Table 3 — Sampling Plans for Group A and Group B Inspections		
Lot Size	Group A, Group II Inspections	Group B
1 to 5	All	All
6 to 13	All	5
14 to 50	13	5
51 to 90	13	7
91 to 150	13	11
151 to 280	20	13
281 to 500	29	16
501 to 1200	34	19
1,201 to 3,200	42	23
3,201 to 10,000	50	29

\*\*NOTE: Parts ordered to Level C are certified to comply with MIL-PRF-21038 Level C, however testing is performed per manufacturer's internal requirements and sampling rates.

## Transceiver 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 times of reflow cycle: 2.

### For More Information

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