

MIL-STD-1553 Transformers

Stacked Dual THT non-QPL Interface Transformers
Ruggedized

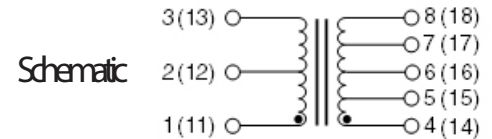


These non-QPL interface transformers are built and tested in ISO 9001 approved facilities. They conform to all electrical and physical parameters of MIL-PRF-21038/27. Choose one of three operating temperature ranges including 0° to +70°C, -40° to +85°C, or -55° to +125°C.

Operating Temp.	Prefix
0° to 70°C	STQC
-40° to +85°C	STQN
-55° to +125°C	STQ

- ⊕ Dual ratio, dual interface (see schematic)
- ⊕ Through-the-board package
- ⊕ Moisture Sensitivity Level: 1
- ⊕ For use in MIL-STD-1553 applications
- ⊕ Vertically stacked for minimum XY area
- ⊕ Performance to MIL-PRF-21038 requirements
- ⊕ Built in ISO 9001 facility
- ⊕ Applicable specifications:

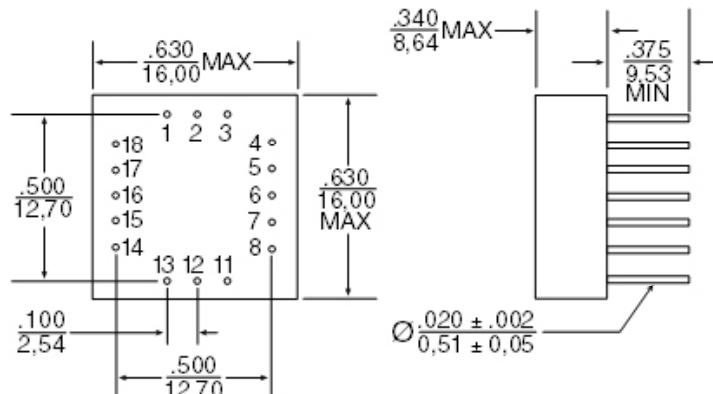
- n MIL-STD-1553B
- n MIL-STD-202
- n MIL-PRF-21038
- n ISO 9001



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

Characteristics				
Part Number ¹	Terminals	Ratio (±3%)	RDC (Ω MAX)	Impedance (Ω MIN)
(XXXX)1553-1	1-3 : 4-8 (11-13 : 14-18) 1-3 : 5-7 (11-13 : 15-17)	1CT:1CT 1CT:.707CT	1-3 (11-13) = 3.5 4-8 (14-18) = 3.0	(1-3 & 11-13) 4,000
(XXXX)1553-2	1-3 : 4-8 (11-13 : 14-18) 1-3 : 5-7 (11-13 : 15-17)	1.4CT:1CT 2CT:1CT	1-3 (11-13) = 3.0 4-8 (14-18) = 3.0	(1-3 & 11-13) 7,200
(XXXX)1553-3	1-3 : 4-8 (11-13 : 14-18) 1-3 : 5-7 (11-13 : 15-17)	1.25CT:1CT 1.66CT:1CT	1-3 (11-13) = 3.2 4-8 (14-18) = 3.0	(1-3 & 11-13) 4,000
(XXXX)1553-5 ²	1-3 : 4-8 (11-13 : 14-18) 1-3 : 5-7 (11-13 : 15-17)	1CT:2.12CT 1CT:1.5CT	1-3 (11-13) = 1.0 4-8 (14-18) = 3.5	(4-8 & 14-18) 4,000
(XXXX)1553-45 ²	1-3 : 4-8 (11-13 : 14-18) 1-3 : 5-7 (11-13 : 15-17)	1CT:2.5CT 1CT:1.79CT	1-3 (11-13) = 1.0 4-8 (14-18) = 3.5	(4-8 & 14-18) 4,000

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



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

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

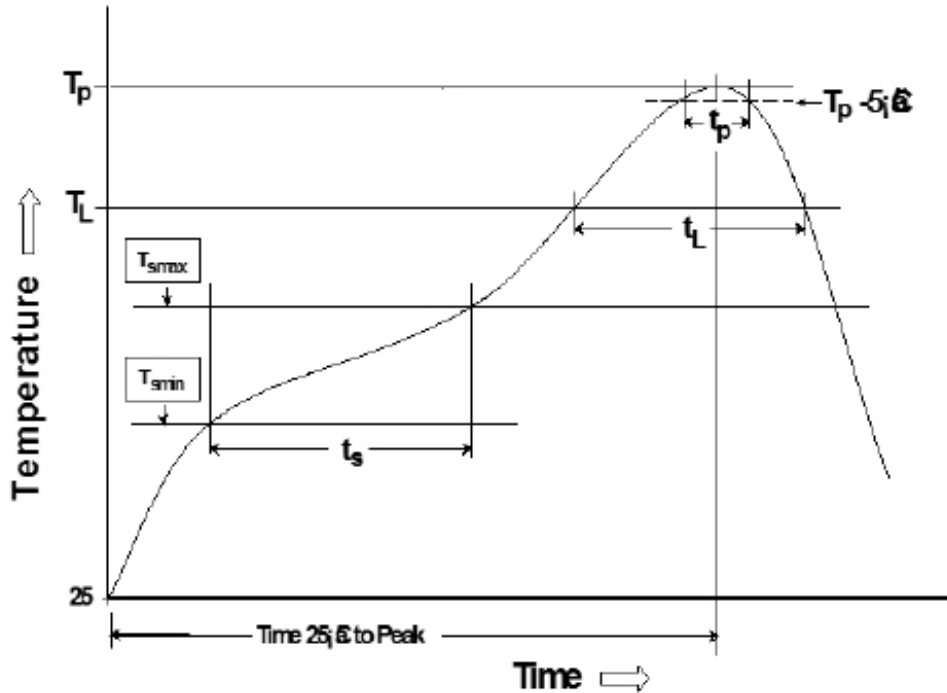
Table 1 — Group A Inspection					
Level "C"***		Level "M"		Level "T"	
Tests	Sampling Plan	Tests	Sampling Plan	Tests	Sampling Plan
N/A	N/A	Electrical Characteristics per MIL-PRF-21038/27	Sample per Table 3	Thermal Shock	100%
N/A	N/A	Visual and Mechanical Inspection	Sample per Table 3	Winding Continuity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

Pulse North America
Headquarters
Two Pearl Buck Court
Bristol, PA 19007
U.S.A.

For Global Sales Representatives and Locations Visit:
<http://www.pulseruggedized.com>

Tel: +1.215.781.6400
Fax: +1.215.781.6403

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright, 2018. PulseR, LLC. All rights reserved.