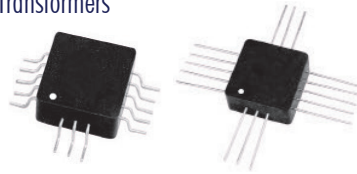


MIL-STD-1553 TRANSFORMERS

Stacked Dual SMT Non-QPL Interface Transformers
Ruggedized



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

- Dual ratio, dual interface
- Surface Mount package
- Conform to all electrical and physical parameters of MIL-PRF-21038/27
- Moisture Sensitivity Level: 3
- Vertically stacked for minimum XY area
- Applicable Specifications:
 - MIL-STD-1553B
 - MIL-STD-202
 - MIL-PRF-21038
 - ISO 9001

Summary Performance Specifications

Droop	20% MAX		
Overshoot	±1V MAX		
Common Mode Rejection (CMR)	45dB MIN		
Frequency Range (no load)	75kHz - 1MHz		
Operating Temperature Range <i>(based on Prefix)</i>	Flat Pack	Gull-Wing	
	SFQC	SGQC	0°C to +70°C
	SFQN	SGQN	-40°C to +85°C
	SFQ	SGQ	-55°C to +125°C
Weight	5 grams MAX		
Insulation Resistance (MIN)	10K MΩ @ 250Vdc		
Dielectric Withstanding Voltage	100Vrms		

Characteristics

Part Number	Terminals	Ratio	RDC MAX	Impedance MIN
		(±3%)	(Ω)	(Ω)
(XXXX)1553-1	1-3:4-8 / 11-13:14-18 1-3:5-7 / 11-13:15-17	1CT:1CT 1CT:0.707CT	1-3, 11-13 = 3.0 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	1.40CT:1CT 2CT:1CT	1-3, 11-13 = 3.5 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*	1-3:4-8 / 11-13:14-18 1-3:5-7 / 11-13:15-17	1CT:2.12CT 1CT:1.50CT	1-3, 11-13 = 1.0 4-8, 14-18 = 3.5	(4-8, 14-18) 4,000
(XXXX)1553-45*	1-3:4-8 / 11-13:14-18 1-3:5-7 / 11-13:15-17	1CT:2.50CT 1CT:1.79CT	1-3, 11-13 = 1.0 4-8, 14-18 = 3.5	(4-8, 14-18) 4,000

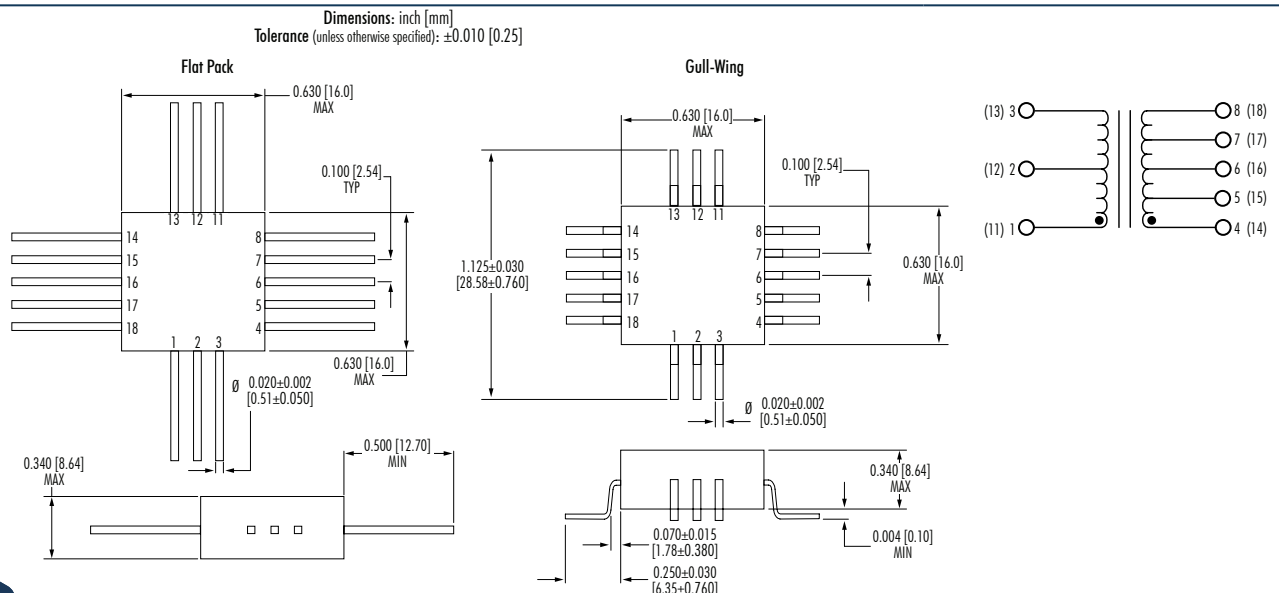
NOTES:

1. Refer to the Summary Performance Specifications Table above to select the prefix for your desired Operating Temperature Range. Replace (XXXX) from the part number in the table with the desired prefix: SFQC, SFQN, SFQ, SGQC, SGQN, SGQ.

* Designed for transceivers utilizing a single supply voltage (+5V).

Mechanicals

Electrical Schematics



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M231.E (11/21)

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 & 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 & 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

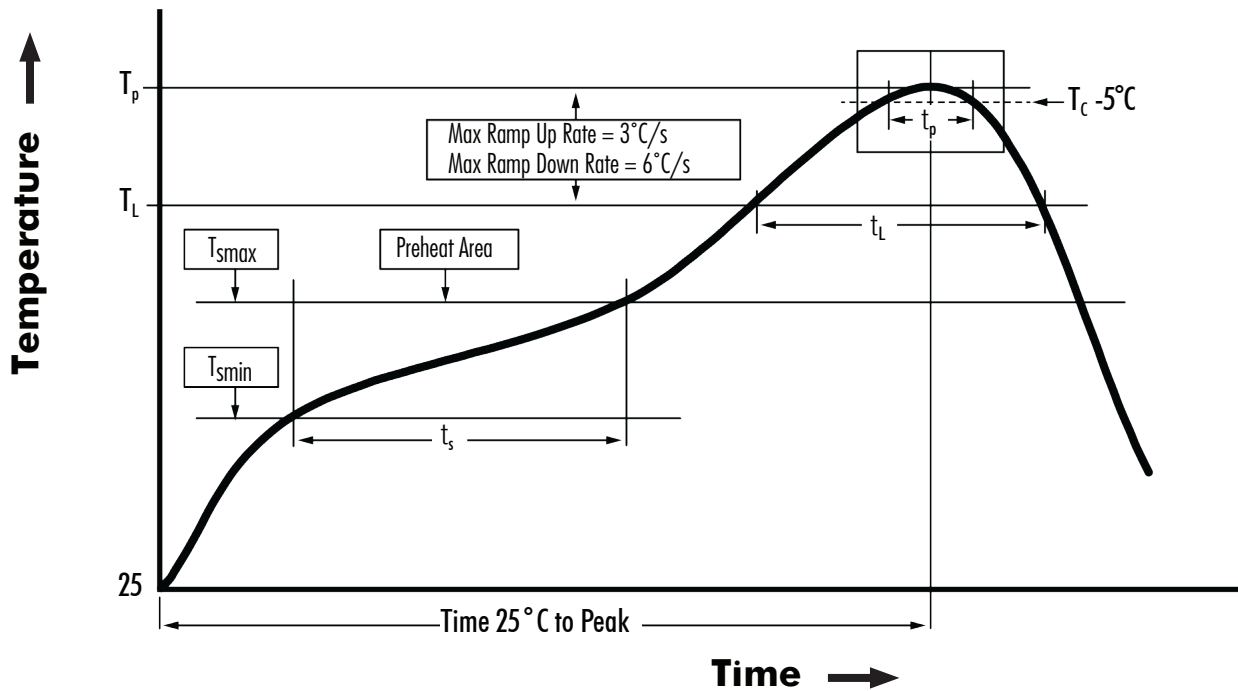
Table 3 - Sampling Plans for Group A and Group B Inspections

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 1,200	34	19
1,201 to 3,200	42	23
3,201 to 10,000	50	29

** 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.



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



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[SFQC1553-45](#) [SFQC1553-5](#) [SFQN1553-1](#) [SFQN1553-2](#) [SFQN1553-3](#) [SFQN1553-45](#) [SFQN1553-5](#) [SGQ1553-1](#)
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[SGQC1553-5](#) [SGQN1553-1](#) [SGQN1553-2](#) [SGQN1553-3](#) [SGQN1553-45](#) [SGQN1553-5](#)