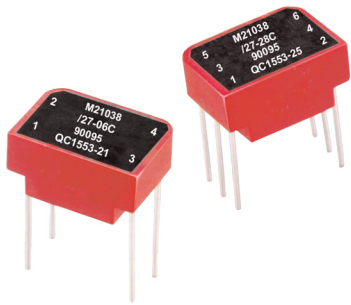


MIL-STD-1553 Transformers

Single Ratio THT QPL Pulse Transformers



- ☐ Qualified for use in QPL MIL-STD-1553 applications
- ☐ Single ratio packages (see Schematics)
- ☐ MSL: 1
- ☐ Designed, built, and tested to MIL-PRF-21038 Levels* C, M, and T
- ☐ Package C is 4-lead; package D is 6-lead (center tap)
- ☐ Built in ISO 9001 facility
- ☐ Applicable specifications

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

- * ■ **Level C** - for high reliability commercial/industrial applications
- **Level M** - for general purpose military applications
- **Level T** - for high reliability critical military applications

Summary Performance Specifications

| | |
|---------------------------------|-------------------|
| Impedance | (see table below) |
| Droop | ≤ 20% |
| Overshoot | ±IV MAX |
| Common Mode Rejection (CMR) | ≥ 45dB |
| Frequency Range (no load) | 75kHz to 1MHz |
| Operating Temperature Range | -55°C to 130°C |
| Weight | ≤ 5 grams |
| Insulation Resistance (MIN) | 10K MΩ @ 250Vdc |
| Dielectric Withstanding Voltage | 100Vrms |

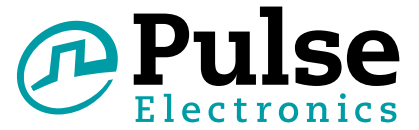
Characteristics

| Line | Level | Military Designation No. | Pulse Part No. | Package | Height (in. MAX) | Terminals | Ratio (±3%) | RDC (Ω MAX) | Impedance (Ω MIN) |
|------|-------|--------------------------|----------------|---------|------------------|-----------|-------------|---------------------|-------------------|
| 1 | C | M21038/27-05C | QC1553-20 | C | .250 | 1-2:4-3 | 1:1.41 | 1-2 2.2 4-3 2.7 | (4-3) 3,000 |
| 2 | M | M21038/27-05 | Q1553-20 | | | | | | |
| 3 | T | M21038/27-05T | QT1553-20 | | | | | | |
| 4 | C | M21038/27-06C | QC1553-21 | D | .250 | 1-5:6.2 | 1CT:1CT | 1-5 2.5 6-2 2.8 | (6-2) 3,000 |
| 5 | M | M21038/27-06 | Q1553-21 | | | | | | |
| 6 | T | M21038/27-06T | QT1553-21 | | | | | | |
| 7 | C | M21038/27-07C | QC1553-22 | D | .250 | 1-5:6.2 | 1CT:1.41CT | 1-5 2.2 6-2 2.7 | (6-2) 3,000 |
| 8 | M | M21038/27-07 | Q1553-22 | | | | | | |
| 9 | T | M21038/27-07T | QT1553-22 | | | | | | |
| 10 | C | M21038/27-08C | QC1553-23 | D | .250 | 1-5:6.2 | 1CT:1.66CT | 1-5 1.5 6-2 2.4 | (6-2) 3,000 |
| 11 | M | M21038/27-08 | Q1553-23 | | | | | | |
| 12 | T | M21038/27-08T | QT1553-23 | | | | | | |
| 13 | C | M21038/27-09C | QC1553-24 | D | .250 | 1-5:6.2 | 1CT:2CT | 1-5 1.3 6-2 2.6 | (6-2) 3,000 |
| 14 | M | M21038/27-09 | Q1553-24 | | | | | | |
| 15 | T | M21038/27-09T | QT1553-24 | | | | | | |
| 16 | C | M21038/27-28C | QC1553-25* | D | .250 | 1-5:6.2 | 1CT:1.5CT | 1-3 0.90 6-2 2.5 | (6-2) 3,000 |
| 17 | M | M21038/27-28 | Q1553-25* | | | | | | |
| 18 | T | M21038/27-28T | QT1553-25* | | | | | | |
| 19 | C | M21038/27-29C | QC1553-51* | D | .250 | 1-5:6.2 | 1CT:1.79CT | 1-5 0.90 6-2 2.5 | (6-2) 3,000 |
| 20 | M | M21038/27-29 | Q1553-51* | | | | | | |
| 21 | T | M21038/27-29T | QT1553-51* | | | | | | |
| 22 | C | M21038/27-30C | QC1553-52* | D | .250 | 1-5:6.2 | 1CT:2.5CT | 1-5 1.0 6-2 2.8 | (6-2) 3,000 |
| 23 | M | M21038/27-30 | Q1553-52* | | | | | | |
| 24 | T | M21038/27-30T | QT1553-52* | | | | | | |

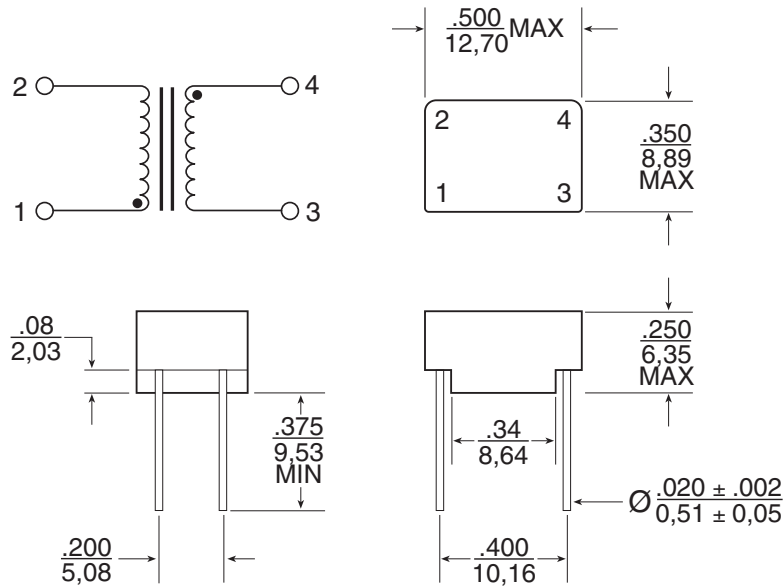
*NOTE: Designed for transceivers utilizing a single supply voltage (+5V).

MIL-STD-1553 Transformers

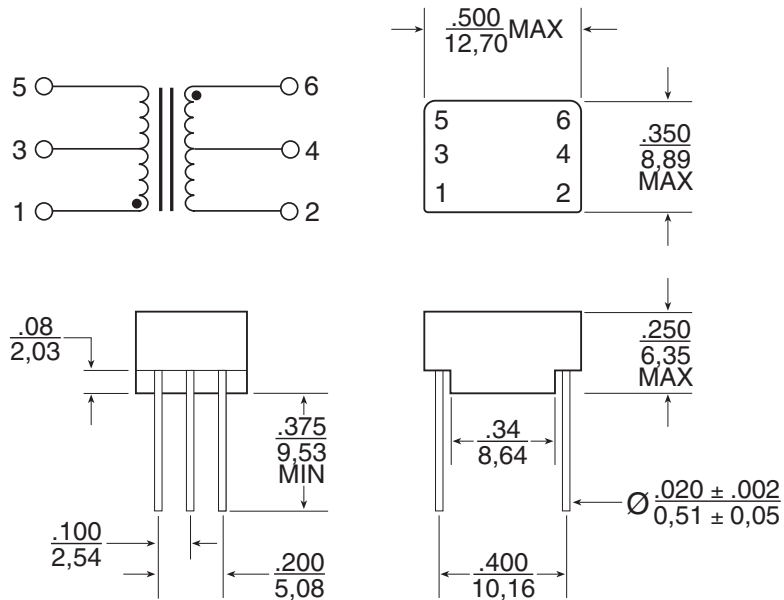
Single Ratio THT QPL Pulse Transformers



Package C



Package D



Notes:

1. All dimensions are in inches.
2. Tolerances: .xx = +.010, .xxx = +.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.

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