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Filtering solutions for Quantum Computing (Operating: 10-20mK: -273°C)

OVERVIEW

Engineered for advanced quantum computing environments, NIC introduces a terminated diplexer delivering reliable performance at ultra-low cryogenic temperatures (10–20 mK i.e. -273°C). Covering DC–6000 MHz with low insertion loss and strong return loss, it ensures signal integrity in demanding applications. Its internal diplexing design provides flat stopband rejection (±5 dB), minimizing noise leakage, preserving qubit coherence, and enhancing signal fidelity. The result is improved system stability and simplified calibration. Custom designs available from DC–20 GHz.

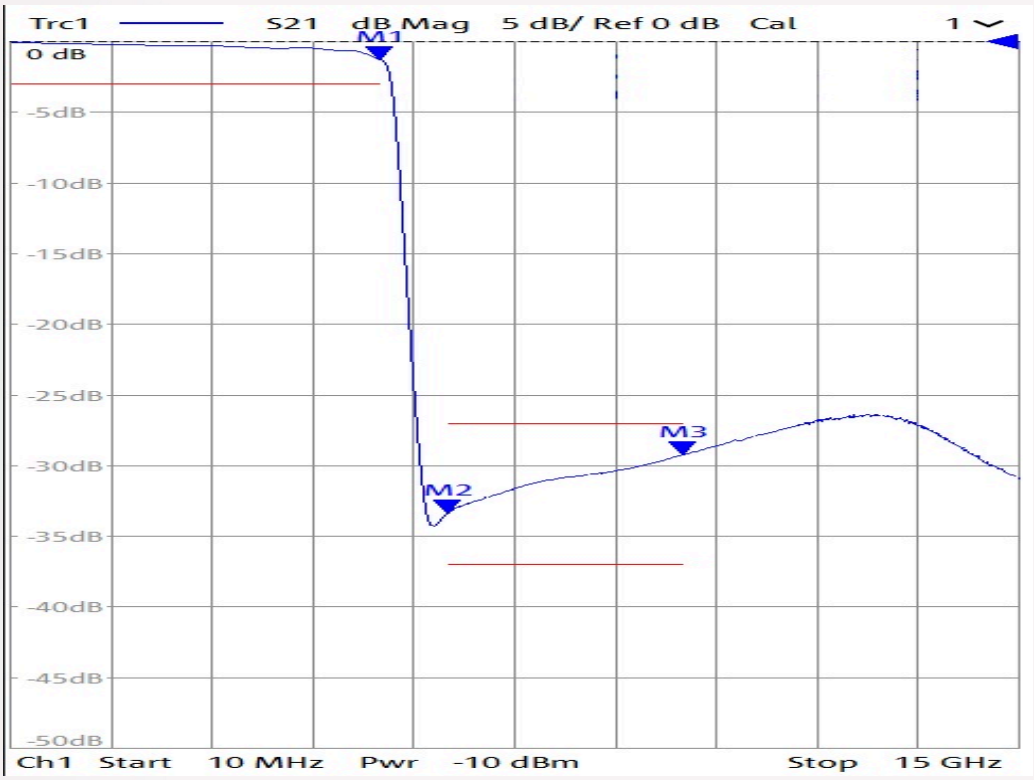
FEATURES

- Operates at **10-20mK (-273°C)**
- Broadband Frequency
- Superior Signal Integrity
- Advanced Noise Suppression
- Flat Rejection within ± 5dB

ELECTRICAL SPECIFICATIONS

Parameters	Specifications
Filter Type	Terminated Diplexer
Passband	DC-5550 MHz
Insertion Loss	3dB max over DC-5550 MHz
Return Loss	10dB min over DC-5550 MHz
Rejection	32 ± 5dB over 6550 MHz - 10,000 MHz
Stopband Return Loss (S22+S11)	10dB min over 6550 MHz - 10,000 MHz
Operating Temperature	**10 - 20 milli Kelvin range (-273.14°C to -273.13°C)**

ELECTRICAL PERFORMANCE DATA



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