

GENERAL DESCRIPTION

These ruggedly constructed, ultraminiature (EIA 0402, 1005 metric) equalizers combine high-performance tantalum nitride (TaN) resistive elements and silicon/oxygen/nitrogen (SiON) capacitive elements with AVX's proprietary, automotive-qualified, glass-sandwich FLEXITERM[®] surface-mount technology, which provides an extra measure of protection against flexure damage during installation. The new GEQ Series equalizers are also manufactured with 100% laser trimming to achieve tight tolerances and offer a low 0.5mm profile, a 125mW power rating, resistance values spanning 10–50Ω, and capacitance values extending from 1–50pF.

Rated for a wide range of operating temperatures (-55°C to +125°C) and compliant with RoHS, ideal applications for the series extend across the optoelectronic, telecommunications, broadband, military, electronic warfare, space, test, and instrumentation markets and include optical transceiver modules, broadband receivers, and transmission and receiver optical subassemblies (TOSA and ROSA).

FEATURES

- EIA 0402 Case Size
- Resistance Range: 10 to 50 Ω typ.
- Capacitance Range: 1 to 50 pF typ.
- Parallel Configurations
- Power Rating: 125 mW
- Operating Temperature: -55°C to +125°C
- Laser Trimmed Resistors
- RoHS Compliant

APPLICATIONS

- Optical Transceiver Modules
- Broadband Receiver
- TOSA / ROSA

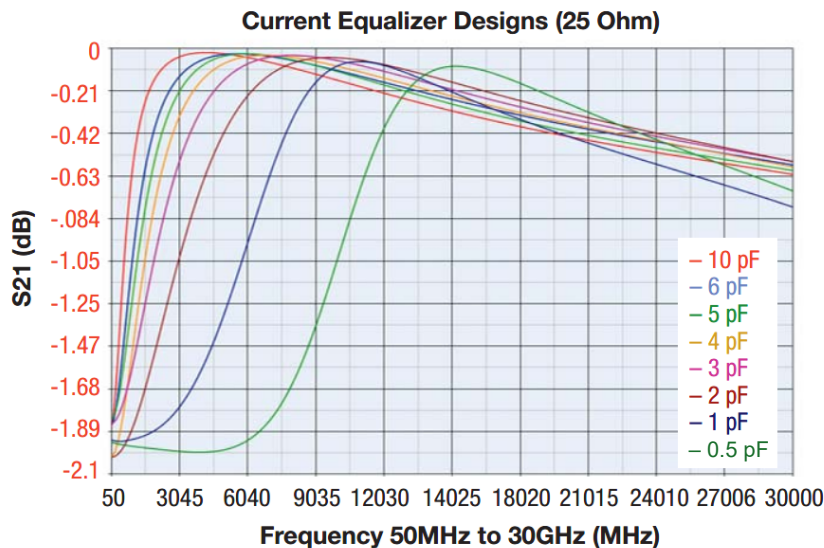
MARKETS

- Opto-electronics
- Telecom
- Broadband Jamming for EW
- Military
- Instrumentation and Test

*For other RC Combinations and EIA Sizes contact factory

HOW TO ORDER

GEQ	25R0	F	05R0	J	T	TR	
AVX Series 0402	Resistance Value (Ω) 3 significant digits R = decimal point	Resistance Tolerance F = 1%	Capacitance Value (pF) 3 significant digits R = decimal point	Capacitance Tolerance J* = 5% K* = 10% M* = 20% *Minimum tolerance = +/- 0.1pF	Terminations T = NiSn Plated	Packaging TR = Tape & Reel	



SPECIFICATIONS

Package Size: EIA 0402

Design: Glass wafer sandwich

Termination: NiSn plated

Power Rating: 125 mW

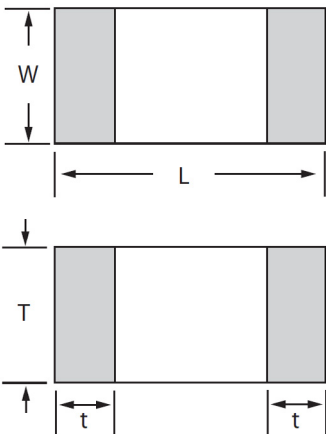
Operating Temperature Range: -55°C to +125°C

Tolerance: Resistor: 1-5%, **Capacitor:** 5-20%

Resistance Range: 10 to 50 Ω (typical)

Capacitance Range: 1 to 50 pF (typical)

DIMENSIONS



Size (EIA)	Length (L)	Width (W)	Thickness (T)	Termination (t)
0402	1.02 ± 0.051 (0.040 ± 0.002)	0.51 ± 0.051 (0.020 ± 0.002)	.020 ± 0.004 (0.50 ± 0.10)	0.25 ± 0.051 (0.010 ± 0.002)

RESISTOR MATERIAL

Thin Film Resistors	TaN
Typical Sheet Resistivity (ohm/sq)	10 to 100
TCR (ppm/°C, -25 to 125°C)	-100 to -150
Stability (Change after 1000 hours @ 125°C)	1.0%

CAPACITOR MATERIAL

Material	SiON
pF/mm Typical	50 to 100
BDV (v/μm)	600
DF	≤0.1%
TCC (ppm/°C, -25 to 125°C)	±60

ENVIRONMENTAL TESTS

Reliability Test	Criteria
Life Test	1000 Hrs. @ 125°C @ 50 mW
85/85 Temp./ Humidity Breakdown	1080 Hrs. @ 50 mW
Thermal Cycle	100 cycles @ -40 to 125°C
Termination Strength	200 g for 50 seconds (Dage Tester)x

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