

**NEW!**

# Chip Inductors for DOCSIS 3.x



- Low inductance (39 – 120 nH) 1812 size chip inductors
- Designed for set-top boxes
- High SRF, up to 2487 MHz
- 2% tolerance for all values

Part number <sup>1</sup>	Inductance <sup>2</sup> ±2% (nH)	Q typ <sup>3</sup>	SRF typ <sup>4</sup> (MHz)	DCR max <sup>5</sup> (mOhms)	Irms <sup>6</sup> (mA)
TA7849-AE_	39	49	2487	120	1100
TA7850-AE_	47	55	1875	110	1100
TA7851-AE_	56	55	1908	126	920
TA7852-AE_	68	55	1972	149	900
PA6691-AE_	80	61	1345	140	900
PA6692-AE_	100	62	1245	160	860
PA6693-AE_	120	67	990	160	860

1. When ordering, please specify **packaging** code:

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**TA7852-AEC**

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel).

**B** = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter C instead.

**D** = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (2200 parts per full reel).

- Inductance measured at 50 MHz using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.
- Q measured at 50 MHz using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
- SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
- DCR measured on a Cambridge Technology micro-ohmmeter and a Coilcraft CCF859 test fixture.
- Current that causes a 15°C temperature rise from 25°C ambient.
- Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Core material** Ceramic

**Terminations** RoHS compliant silver-palladium-platinum-glass frit.

**Weight** 109 – 128 mg

**Ambient temperature** –40°C to +125°C with Irms current

**Maximum part temperature** +140°C (ambient + temp rise)

**Storage temperature** Component: –40°C to +140°C.

Tape and reel packaging: –40°C to +80°C

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Temperature Coefficient of Inductance (TCL)** +25 to +125 ppm/°C

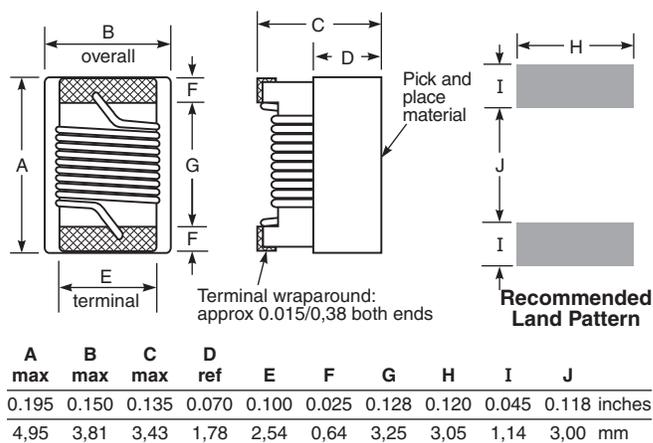
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

One per billion hours / one billion hours, calculated per Telcordia SR-332

**Packaging** 600 per 7" reel; 2200 per 13" reel. Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 3.7 mm pocket depth

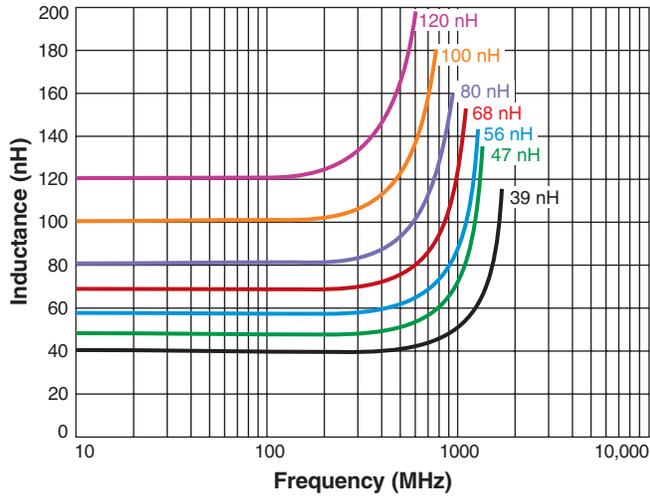
**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).



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# DOCSIS filters – 1812

## L vs Frequency



## Q vs Frequency

