

# SMT Gate Drive Transformer



- Designed for transformer coupled MOSFET and IGBT gate drive circuits; operating frequency: 50 kHz to 2 MHz.
- 2250 Vdc, one minute primary to secondary isolation
- Requires only 56 mm<sup>2</sup> of board space.
- Specified by National Semiconductor on AN-1521 for their POE+PHYTEREV-I/-E evaluation boards.
- Specified on the Microsemi PD70211EV B51F-12 evaluation board

**Core material** Ferrite

**Terminations** RoHS compliant tin-silver over tin over nickel over phos bronze

**Weight** 700 mg

**Ambient temperature** -40°C to +125°C

**Storage temperature** Component: -40°C to +125°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

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

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

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging** 175/7" reel; 750/13" reel Plastic tape: 24 mm wide, 0.4 mm thick, 12 mm pocket spacing, 7.0 mm pocket depth

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf

Part number <sup>1</sup>	Turns ratio	Primary inductance <sup>2</sup> min (µH)	Leakage inductance <sup>3</sup> max (µH)	Primary DCR max (Ohms)	Secondary DCR max (Ohms)	Volt-time product <sup>4</sup> (V-µsec)	SRF min <sup>5</sup> (MHz)	Capacitance pri to sec max (pF)
FA2659-AL_	1 : 1	296.0	1.5	0.795	0.655	34.2	1.39	21.9

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

**FA2659-ALC**

**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (175 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 (750 parts per full reel).

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc

3. Leakage inductance measured at 100 kHz, 0.1 Vrms with secondary pins shorted.

4. Based on Bs<sub>at</sub> of the core at 25°C and number of turns of the primary.

5. SRF measured with coils connected in series using an Agilent/HP 4192 or equivalent.

6. Electrical specifications at 25°C.

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

