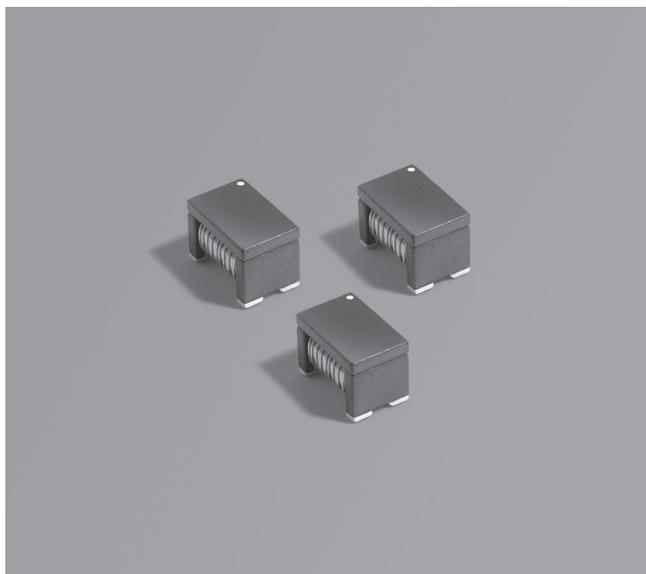


# LLC Half-Bridge Transformers

For Isolated Gate Driver  
Bias Supply



- Low interwinding capacitance to minimize EMI and achieve high CMTI (Common Mode Transient Immunity)
- Optimized for isolated bias supplies for SiC and GaN gate drivers, such as Texas Instrument UCC25800-Q1
- Ideal for automotive OBC and traction Inverters in EV/HEV
- Highly automated for cost-effective and exceptional quality and reliability
- AEC-Q200 qualified and Isolation (VDC) 4000<sup>7</sup>

**Core material** Ferrite

**Terminations** RoHS compliant tin over nickel over silver glass frit.

**Weight** 0.53 – 0.54 g

**Max part temperature** +140°C

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

**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

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

**Packaging** 350/7" reel; 1500/13" reel Plastic tape: 16 mm wide, 0.4 mm thick, 8 mm pocket spacing, 5.5 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 Pri : Sec	Inductance <sup>2</sup> ±30% (µH)		DCR max <sup>3</sup> (Ohms)		Leakage L <sup>4</sup> ±20% (µH)		Irms <sup>5</sup> (mA)	Volt-time product (V-µsec)	Cap <sup>6</sup> max (pF)
		Pri	Sec	Pri	Sec	Pri	Sec			
HTX7045C-753ARC	1 : 1	75	75	0.35	0.35	8.5	8.5	730	33.9	0.75
HTX7045C-104ARC	1 : 1	100	100	0.40	0.40	9.5	9.5	680	38.8	0.90
HTX7045C-124DRC	1.5 : 1	120	54	0.42	0.28	12.5	5.5	660	38.8	0.70
HTX7045C-124ERC	1.33 : 1	120	68	0.42	0.32	12	6.5	660	45.3	0.70
HTX7045C-124FRC	1.2 : 1	120	84	0.42	0.35	11	7.5	660	38.8	0.75
HTX7045C-134BRC	2.5 : 1	130	21	0.44	0.17	15	2.5	660	45.3	0.70
HTX7045C-144CRC	2.0 : 1	140	35	0.45	0.23	15	3.5	640	45.3	0.75

1. When ordering, please specify **turns ratio** and **packaging** codes:

**HTX7045C-144CRC**

**Turns ratio:** A = 1:1 B = 2.5:1 C = 2:1 D = 1.5:1

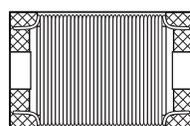
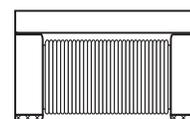
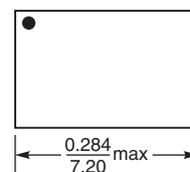
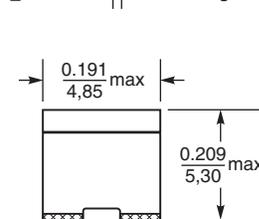
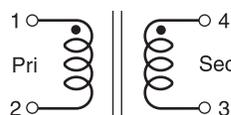
E = 1.33:1 F = 1.2:1

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (350 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

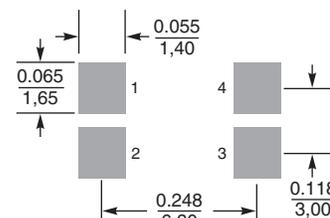
D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (1500 parts per full reel).

- Inductance measured at 100 kHz, 0.1 Vrms, 0 ADC on an Agilent 4263B (or equivalent).
- DCR is measured on a Keithley 580 Micro-ohmmeter (or equivalent).
- Leakage Inductance LL is measured at 100 KHz, 0.1 Vrms on an Agilent 4263B (or equivalent). Sec is shorted for PRI LL / PRI is shorted for SEC LL.
- Current that causes a 40°C rise from 25°C when applied to the primary winding with secondary current defined by the turns ratio.
- Interwinding capacitance is measured from primary to secondary at 250 KHz, 0.1 Vrms.
- 2800 Vrms, 4000 VDC; one minute isolation (hipot) measured between primary and secondary. 4.9 mm creepage and clearance Material Group IIIa (175 ≤ CTI < 400).
- Electrical specifications at 25°C.

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



Dimensions are in  $\frac{\text{inches}}{\text{mm}}$



**Recommended  
Land Pattern**



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