

EPCOS Product Brief 2015

High-Current Chokes

Current-Compensated Common-Mode Chokes

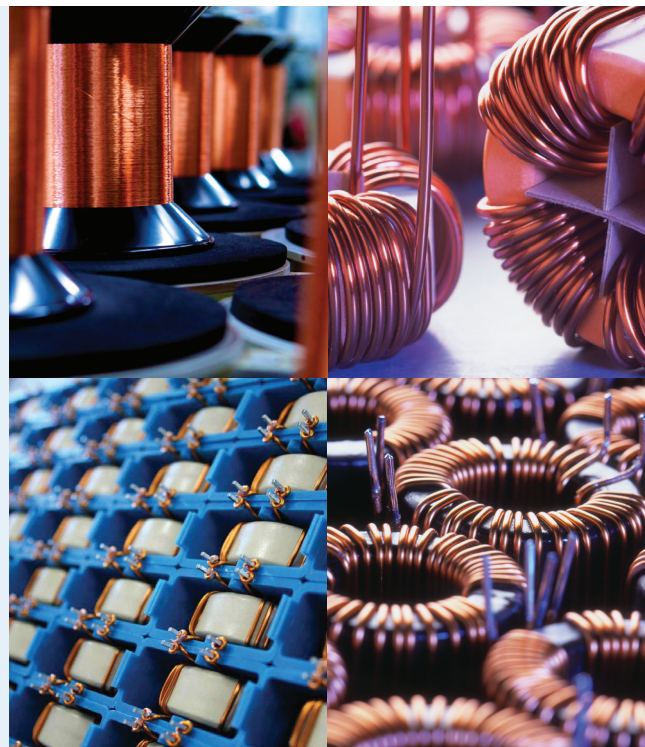
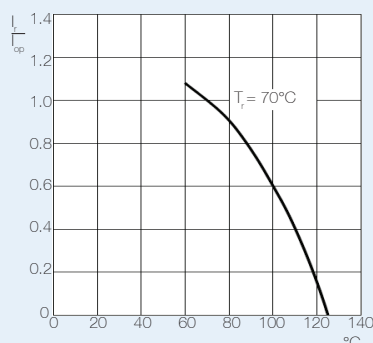
New high-current common-mode chokes featuring:

- Glueless design
- High voltages 600 V/1000 V
- UL class F (155°C)

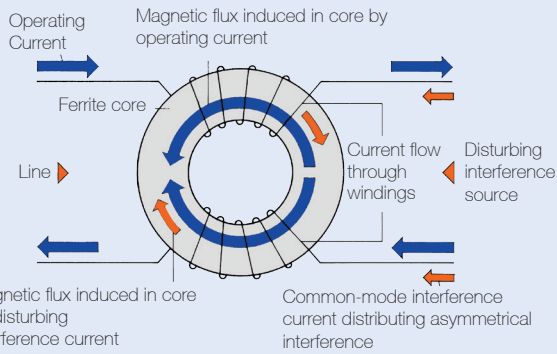
Compact electrical and electronic equipment primarily generates common-mode interference. In order to be able to meet the safety requirements (keeping within the leakage current limits), chokes with a high asymmetrically effective inductance must be used. Current-compensated chokes with a closed core topology are especially suitable for this purpose. The problem of core material saturation due to the useful current is solved in these designs by winding two coils with equal number of turns on the core. These coils are connected in such a way that the magnetic flux induced by the upper coil is compensated by the lower coil.

Derating Curve

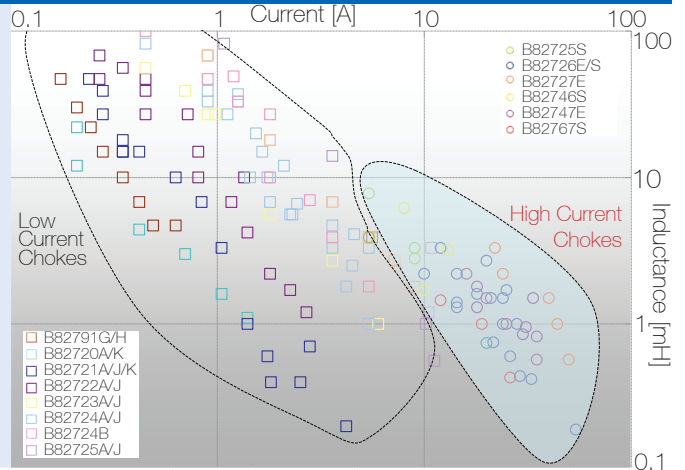
- Ambient temperatures based on 70°C part rating
- Derating curve based on 70°C part rating
- Operating current of chokes to follow curve
- AC voltages rated at 50/60 Hz



Magnetic Flux



Selection Guide



High-Current Chokes

| | $I_r/70^\circ\text{C}$ [A] | L_r [mH] | L-tol. | L_{stray} [μH] | R_{typ} [m Ω] | V_r | V/H | Core | Ordering Code | UL EIS* |
|--|----------------------------|------------|--------|--------------------------------------|--------------------------------|-------|-----|------|---------------|---------|
|--|----------------------------|------------|--------|--------------------------------------|--------------------------------|-------|-----|------|---------------|---------|

Double Chokes

B82725S



| | | | | | | | | | |
|-----|-----|--------|----|------|-------|---|-----|-----------------|----|
| 5.4 | 3.9 | +/-30% | 33 | 24 | 250V~ | V | R32 | B82725S2602N002 | No |
| 5.4 | 7.8 | +/-30% | 35 | 24 | 250V~ | V | R32 | B82725S2602N041 | No |
| 9 | 2.8 | +/-30% | 30 | 12.5 | 250V~ | V | R32 | B82725S2103N003 | No |
| 9 | 3.3 | +/-30% | 35 | 13.5 | 250V~ | V | R32 | B82725S2103N004 | No |

B82726S/E



| | | | | | | | | | |
|------|------|----------|------|------|--------------|---|-----|-----------------|-----|
| 11 | 2.2 | +/-30% | 47 | 12 | 250V~/750V~ | V | R40 | B82726S6103N001 | Yes |
| 14 | 3.3 | +/-30% | 32 | 8.4 | 250V~/750V~ | V | R40 | B82726S6123N020 | Yes |
| 14.4 | 1.4 | +/-30% | 21 | 7.1 | 250V~ | V | R42 | B82726S2163N002 | No |
| 14.4 | 2.2 | +/-30% | 24 | 7.1 | 250V~ | V | R42 | B82726S2163N030 | No |
| 15 | 1.3 | +/-30% | 16 | 5 | 250V~ | H | R42 | B82726S2183N020 | No |
| 18 | 1.6 | -30/+50% | 15 | 4.5 | 250V~ | V | R36 | B82726S2203A020 | No |
| 20 | 2.7 | -30/+50% | 19.3 | 4.4 | 600V~/1000V~ | V | R42 | B82726E6203B041 | Yes |
| 21 | 1.5 | -30/+50% | 8.3 | 2.8 | 600V~/1000V~ | V | R36 | B82726E6213A040 | Yes |
| 21.6 | 0.75 | -30/+50% | 8 | 3.2 | 250V~ | V | R36 | B82726S2243A020 | No |
| 24 | 1 | -30/+50% | 5.7 | 2.3 | 600V~/1000V~ | V | R36 | B82726E6243A041 | Yes |
| 24 | 1.5 | -30/+50% | 11 | 3.2 | 600V~/1000V~ | V | R42 | B82726S6203A040 | Yes |
| 25 | 1.7 | -30/+50% | 10 | 2.75 | 300V~ | H | R42 | B82726S3223A340 | Yes |
| 26 | 0.6 | -30/+50% | 3.8 | 1.7 | 600V~/1000V~ | V | R36 | B82726E6263A040 | Yes |
| 28 | 1 | -30/+50% | 7 | 2.1 | 600V~/1000V~ | V | R42 | B82726E6283B040 | Yes |
| 29 | 0.44 | -30/+50% | 2.9 | 1.5 | 600V~/1000V~ | V | R36 | B82726S6243A040 | Yes |
| 33 | 0.42 | -30/+50% | 3.5 | 1.4 | 600V~/1000V~ | V | R42 | B82726E6333B040 | Yes |
| 56 | 0.19 | -30/+50% | 1.3 | 1.1 | 300V~ | V | R42 | B82726S3543N040 | Yes |

B82727E



| | | | | | | | | | |
|----|------|----------|-----|------|--------------|---|-----|-----------------|-----|
| 22 | 3.3 | -30/+50% | 20 | 4.6 | 600V~/1000V~ | V | R50 | B82727E6223A040 | Yes |
| 24 | 2.2 | -30/+50% | 15 | 3.9 | 600V~/1000V~ | V | R50 | B82727E6243A040 | Yes |
| 40 | 1.5 | -30/+50% | 9 | 1.7 | 600V~/1000V~ | V | R50 | B82727E6403A040 | Yes |
| 44 | 1 | -30/+50% | 6.3 | 1.35 | 600V~/1000V~ | V | R50 | B82727E6443A040 | Yes |
| 50 | 0.57 | -30/+50% | 3.7 | 1 | 600V~/1000V~ | V | R50 | B82727E6503A040 | Yes |

Triple Chokes

B82746S



| | | | | | | | | | |
|----|------|----------|-----|-----|-----------|---|-----|-----------------|-----|
| 8 | 6.2 | -30/+50% | 34 | 18 | 550/320V~ | H | R42 | B82746S6702A040 | Yes |
| 10 | 1.7 | -30/+50% | 14 | 9.8 | 520/300V~ | V | R38 | B82746S4103A020 | No |
| 10 | 2 | -30/+50% | 19 | 9.6 | 500/300V~ | V | R38 | B82746S4103A021 | No |
| 13 | 3.2 | -30/+50% | 16 | 6.5 | 550/320V~ | H | R42 | B82746S4143A040 | Yes |
| 14 | 0.35 | +/-35% | 3.8 | 3.7 | 440/250V~ | V | R34 | B82745S6123N002 | No |
| 20 | 0.75 | -30/+50% | 8 | 2.7 | 500/300V~ | H | R42 | B82746S4203A020 | Yes |
| 20 | 1.15 | -30/+50% | 8 | 2.7 | 500/300V~ | H | R42 | B82746S4203A040 | Yes |

B82747E/S



| | | | | | | | | | |
|----|------|----------|------|-----|-----------|---|-----|-----------------|-----|
| 16 | 2.2 | -30/+50% | 11.5 | 6 | 600/350V~ | V | R50 | B82747E6163A040 | Yes |
| 18 | 1.8 | +/-30% | 17 | 4.7 | 440/250V~ | H | R58 | B82747S4183N021 | Yes |
| 18 | 1.3 | +/-30% | 15 | 5.2 | 520/300V~ | V | R50 | B82747S4203A020 | No |
| 20 | 1.5 | -30/+50% | 9 | 4.2 | 600/350V~ | V | R50 | B82747E6203A040 | Yes |
| 25 | 1 | -30/+50% | 5.5 | 2.8 | 600/350V~ | V | R50 | B82747E6253A040 | Yes |
| 30 | 0.85 | +/-35% | 5.5 | 1.9 | 500/300V~ | H | R50 | B82747S4253A040 | Yes |
| 31 | 0.95 | +/-30% | 5 | 1.5 | 440/250V~ | H | R50 | B82747S6313N061 | Yes |
| 35 | 0.57 | -30/+50% | 3 | 1.4 | 600/350V~ | V | R50 | B82747E6353A040 | Yes |
| 35 | 0.82 | +/-35% | 4 | 1.4 | 500/300V~ | H | R50 | B82747S4303A041 | Yes |
| 35 | 1.5 | +/-30% | 10 | 2.6 | 440/250V~ | H | R58 | B82747S4423N020 | Yes |

Quadruple Chokes

B82767S



| | | | | | | | | | |
|----|------|----------|-----|-----|-----------|---|-----|-----------------|-----|
| 12 | 1.45 | -30/+50% | 13 | 7.1 | 500/300V~ | H | R50 | B82767S4123N030 | Yes |
| 19 | 1 | -30/+50% | 7.7 | 2.8 | 500/300V~ | H | R50 | B82767S4193N030 | Yes |
| 26 | 0.43 | -30/+50% | 3.6 | 1.5 | 500/300V~ | H | R50 | B82767S4263N030 | Yes |

* UL Electrical Installation System Class 155(F)