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# IHLP® INDUCTOR LOSS CALCULATOR TOOL

[ Instructions ]   [ Help ]

**Choose Calculator Type**
Buck ▾

**Applications**
Commercial ▾

**Family/Case Size**
IHLP-4040 ▾

**Series**
DZ-11 ▾

**Select Inductance:**

| | |
|---|---|
| 0.19 µH | ○ |
| 0.24 µH | ○ |
| 0.36 µH | ○ |
| 0.47 µH | ◉ |
| 0.56 µH | ○ |
| 0.78 µH | ○ |
| 1.0 µH | ○ |
| 1.5 µH | ○ |
| 1.8 µH | ○ |
| 2.0 µH | ○ |
| 4.7 µH | ○ |
| 6.8 µH | ○ |
| 10 µH | ○ |
| 22 µH | ○ |
| 33 µH | ○ |
| 47 µH | ○ |
| 100 µH | ○ |

**IHLP-4040DZ-11** - **0.47 Buck µH Ind. Loss Calculator**

| | | Ratings |
|---|---|---|
| Inductance | | 0.47 |
| 25º C DC Res | | 0.00153 |
| Isat | | 30 |
| I(Heat) | | 30 |

**Inputs:** Enter data into yellow fields | **Outputs**

| Input | Value | Unit | | Output | Value | Unit |
|---|---|---|---|---|---|---|
| Frequency = | 1000000 | Hz | | $ET_{ckt}$ | 2.92 | V-usec |
| $I_{ind}$ = | 20 | Amps | | F(eff) | 653886.5 | Hertz |
| Ambient Temp = | 25 | ºC | | Res | 0.001766 | Ohms |
| Volts In = | 12 | Volts | | $I_{max}$ | 23.11 | Amps |
| Volts Out = | 5 | Volts | | $I_{min}$ | 16.89 | Amps |
| $V_{SW}$ = | 0.025 | Volts | | $I_{ripple}$ | 6.21 | Amps |
| $V_D$ = | 0.025 | Volts | | Duty | 0.42 | |
| | | | | $P_{core}$ | 1.165 | Watts |
| $ET_{100}$ = | 0.50 | V-usec | | $P_{dc}$ | 0.706 | Watts |
| $B_{pk}$ = | 584.2 | G | | $P_{ac}$ | 0.261 | Watts |
| A | 0.453 | Inch | 11.5 mm | $P_{tot}$ | 2.133 | Watts |
| B | 0.405 | Inch | 10.3 mm | Temp. Coeff. | 25.2 | ºC/W |
| C | 0.158 | Inch | 4.0 mm | Temp Rise | 53.7 | ºC |
| | | | | Comp Temp | 78.7 | ºC |

| Reference Cost | 1.1 | | **Compared to IHLP-2525CZ-01** |
|---|---|---|---|

**Inductor Current (O**

23.1

20.0

10.0

0.0

0        0.5

**Time (µSec**

**Warning Messages:**

**Notes May Be Add**

[ Feedback ]