

MICROLITE<sup>®</sup> Toroidal Cores are manufactured with Metglas<sup>®</sup> amorphous alloy 2605SA1 ribbon. Their unique combination of high saturation flux density and low loss make them the first choice for all energy storage applications, enabling the designer to achieve both size and system cost reduction.



### Applications

- SMPS output inductors
- Flyback transformers
- Differential input inductors
- PVC inductors
- VRM inductors

### Benefits

- High saturated flux density
- Significant size reduction
- Low core loss
- Extended bias capability
- Fewer turns due to higher permeability

#### Physical Properties Metglas MICROLITE XP Cores

|   |      |
|---|------|
| Ribbon Thickness (μm) .....               | .23  |
| Density (g/cm <sup>3</sup> ) .....        | 7.18 |
| Thermal Expansion (ppm/°C) .....          | 7.6  |
| Crystallization Temperature (°C) .....    | .508 |
| Curie Temperature (°C) .....              | .399 |
| Continuous Service Temperature (°C) ..... | .150 |

#### Magnetic Properties Metglas MICROLITE XP Cores

|   |          |
|---|----------|
| Saturation Flux Density (T) .....           | 1.56     |
| Permeability (depending on core size) ..... | .245/270 |

Percent Permeability vs. DC Bias @ 25°C

MICROLITE  $\mu = 245$



MICROLITE  $\mu = 270$



Core Loss vs. Flux Density @ 25°C



Temperature Dependence of Inductance

MICROLITE  $\mu = 245$



Permeability vs. Frequency





**Ordering Information**

Example:  
**MP1710XDGC**

METGLAS Products  
Outside Diameter (OD)  
Height (HT)

Distributed Gap Core

| Box Type (X) | DuPont Material | UL File No. | Flam. Rating UL 94 | Elec. Rel. Temp. Rec. Index (UL746B) Temp. |
|--------------|-----------------|-------------|--------------------|--|
| P            | Zyrel® 7DG33L   | E41938      | HB                 | 120  |
| L            | Zyrel® FR50     | E41938      | V-0                | 130  |
| V            | Rymite® FR530L  | E68678      | V-0                | 150  |
| M            | Epoxy FR534SD   | E206120     | —                  | —  |

Class B, F  
Encapsulated cores are available upon request.

| MICROLITE® Toroidal Cores |                |              |              |                        |                                   |                        |                                   |  |              |                                       |
|---------------------------|----------------|--------------|--------------|------------------------|-----------------------------------|------------------------|-----------------------------------|--|--------------|---------------------------------------|
| Core No.                  | CORE DIMENSION |              |              | Performance Parameters |                                   |                        |                                   |  |              |                                       |
|                           | O.D.Max (mm)   | I.D.Min (mm) | Ht. Max (mm) | l <sub>m</sub> (cm)    | A <sub>c</sub> (cm <sup>2</sup> ) | Vol (cm <sup>3</sup> ) | W <sub>a</sub> (cm <sup>2</sup> ) | W <sub>a</sub> A <sub>c</sub> (cm <sup>4</sup> ) | Initial Perm | A <sub>L</sub> * (nH/N <sup>2</sup> ) |
| MP1005MDGC                | 11.32          | 4.47         | 6.12         | 2.40                   | 0.10                              | 0.25                   | 0.16                              | 0.016  | 270          | 144.1                                 |
| MP1105MDGC                | 12.19          | 6.07         | 6.29         | 2.80                   | 0.10                              | 0.27                   | 0.29                              | 0.028  | 270          | 116.5                                 |
| MP1205MDGC                | 13.66          | 7.46         | 6.29         | 3.22                   | 0.09                              | 0.30                   | 0.44                              | 0.041  | 270          | 97.7                                  |
| MP1306MDGC                | 14.67          | 7.46         | 7.87         | 3.37                   | 0.15                              | 0.51                   | 0.44                              | 0.066  | 245          | 137.8                                 |
| MP1603MDGC                | 17.03          | 8.99         | 4.70         | 3.98                   | 0.09                              | 0.34                   | 0.63                              | 0.055  | 270          | 73.9                                  |
| MP1710MDGC                | 18.68          | 12.16        | 11.05        | 4.74                   | 0.20                              | 0.94                   | 1.16                              | 0.230  | 245          | 128.5                                 |
| MP2010MDGC                | 21.25          | 12.16        | 11.05        | 5.13                   | 0.30                              | 1.54                   | 1.16                              | 0.348  | 245          | 180.1                                 |
| MP2310MDGC                | 24.35          | 12.16        | 11.05        | 5.60                   | 0.43                              | 2.38                   | 1.16                              | 0.494  | 245          | 233.7                                 |
| MP2510MDGC                | 26.84          | 18.51        | 11.05        | 7.01                   | 0.27                              | 1.89                   | 2.69                              | 0.725  | 245          | 118.4                                 |
| MP2610MDGC                | 26.92          | 15.97        | 11.05        | 6.61                   | 0.37                              | 2.48                   | 2.00                              | 0.751  | 245          | 174.6                                 |
| MP3210MDGC                | 33.57          | 21.69        | 11.05        | 8.54                   | 0.41                              | 3.52                   | 3.69                              | 1.520  | 245          | 148.3                                 |
| MP3310MDGC                | 34.06          | 14.70        | 11.05        | 7.49                   | 0.71                              | 5.34                   | 1.70                              | 1.210  | 245          | 292.9                                 |
| MP3505MDGC                | 36.40          | 21.69        | 6.29         | 8.97                   | 0.26                              | 2.35                   | 3.69                              | 0.968  | 245          | 90.0                                  |
| MP3510MDGC                | 36.52          | 18.51        | 11.05        | 8.48                   | 0.66                              | 5.58                   | 2.69                              | 1.770  | 245          | 238.9                                 |
| MP3710MDGC                | 38.50          | 21.69        | 11.05        | 9.29                   | 0.61                              | 5.66                   | 3.69                              | 2.251  | 245          | 201.9                                 |
| MP4010MDGC                | 41.58          | 21.69        | 11.05        | 9.76                   | 0.73                              | 7.15                   | 3.69                              | 2.706  | 245          | 231.1                                 |
| MP4510MDGC                | 46.73          | 21.69        | 11.05        | 10.55                  | 0.94                              | 9.91                   | 3.69                              | 3.472  | 245          | 274.4                                 |
| MP7050MDGC                | 13.23          | 7.46         | 6.12         | 3.14                   | 0.08                              | 0.25                   | 0.44                              | 0.035  | 245          | 78.2                                  |
| MP7089MDGC                | 46.55          | 28.95        | 15.72        | 11.65                  | 0.94                              | 10.92                  | 6.58                              | 6.170  | 245          | 247.7                                 |
| MP7109MDGC                | 57.21          | 37.44        | 15.32        | 14.64                  | 1.03                              | 15.13                  | 11.01                             | 11.376   | 245          | 217.4                                 |
| MP7120MDGC                | 17.31          | 10.46        | 7.87         | 4.24                   | 0.14                              | 0.59                   | 0.86                              | 0.119  | 245          | 100.3                                 |
| MP7195MDGC                | 54.32          | 26.97        | 16.52        | 12.49                  | 1.60                              | 19.98                  | 5.71                              | 9.136  | 245          | 394.1                                 |
| MP7206MDGC                | 21.41          | 13.46        | 7.87         | 5.35                   | 0.17                              | 0.89                   | 1.42                              | 0.238  | 245          | 96.2                                  |
| MP7254MDGC                | 39.38          | 24.86        | 15.65        | 9.91                   | 0.75                              | 7.46                   | 4.85                              | 3.656  | 245          | 234.1                                 |
| MP7310MDGC                | 23.49          | 13.46        | 7.87         | 5.66                   | 0.22                              | 1.25                   | 1.42                              | 0.315  | 245          | 120.7                                 |
| MP7324MDGC                | 36.99          | 23.01        | 11.05        | 9.24                   | 0.49                              | 4.50                   | 4.16                              | 2.026  | 245          | 162.3                                 |
| MP7350MDGC                | 23.53          | 14.22        | 9.91         | 5.79                   | 0.27                              | 1.55                   | 1.59                              | 0.425  | 245          | 142.3                                 |
| MP7380MDGC                | 18.30          | 10.23        | 7.87         | 4.35                   | 0.17                              | 0.74                   | 0.82                              | 0.140  | 245          | 120.6                                 |
| MP7438MDGC                | 46.61          | 25.22        | 18.99        | 11.05                  | 1.43                              | 15.80                  | 4.99                              | 7.141  | 245          | 398.4                                 |
| MP7548MDGC                | 33.25          | 19.73        | 11.05        | 8.15                   | 0.47                              | 3.82                   | 3.06                              | 1.435  | 245          | 177.4                                 |
| MP7585MDGC                | 34.87          | 23.95        | 9.91         | 9.08                   | 0.32                              | 2.93                   | 4.50                              | 1.452  | 245          | 109.3                                 |
| MP7715MDGC                | 51.53          | 32.46        | 13.89        | 12.97                  | 0.89                              | 11.57                  | 8.27                              | 7.379  | 245          | 211.7                                 |
| MP7930MDGC                | 27.18          | 13.46        | 11.05        | 6.21                   | 0.48                              | 2.97                   | 1.42                              | 0.681  | 245          | 237.3                                 |

| MICROLITE® Toroidal Cores |                |              |              |                        |                                   |                        |                                   |  |              |                                       |
|---------------------------|----------------|--------------|--------------|------------------------|-----------------------------------|------------------------|-----------------------------------|--|--------------|---------------------------------------|
| Core No.                  | CORE DIMENSION |              |              | Performance Parameters |                                   |                        |                                   |  |              |                                       |
|                           | O.D.Max (mm)   | I.D.Min (mm) | Ht. Max (mm) | l <sub>m</sub> (cm)    | A <sub>c</sub> (cm <sup>2</sup> ) | Vol (cm <sup>3</sup> ) | W <sub>g</sub> (cm <sup>2</sup> ) | W <sub>g</sub> A <sub>c</sub> (cm <sup>4</sup> ) | Initial Perm | A <sub>L</sub> * (nH/N <sup>2</sup> ) |
| MP1306LDGC                | 15.80          | 6.17         | 8.13         | 3.37                   | 0.15                              | 0.51                   | 0.30                              | 0.045  | 245          | 137.8                                 |
| MP1306PDGC                | 15.80          | 6.17         | 8.13         | 3.37                   | 0.15                              | 0.51                   | 0.30                              | 0.045  | 245          | 137.8                                 |
| MP1306VDGC                | 15.80          | 6.17         | 8.13         | 3.37                   | 0.15                              | 0.51                   | 0.30                              | 0.045  | 245          | 137.8                                 |
| MP1603LDGC                | 18.24          | 7.87         | 4.70         | 3.98                   | 0.09                              | 0.34                   | 0.49                              | 0.042  | 270          | 73.9                                  |
| MP1603PDGC                | 18.24          | 7.87         | 4.70         | 3.98                   | 0.09                              | 0.34                   | 0.49                              | 0.042  | 270          | 73.9                                  |
| MP1603VDGC                | 18.24          | 7.87         | 4.70         | 3.98                   | 0.09                              | 0.34                   | 0.49                              | 0.042  | 270          | 73.9                                  |
| MP1710LDGC                | 20.22          | 10.87        | 11.43        | 4.74                   | 0.20                              | 0.94                   | 0.93                              | 0.184  | 245          | 128.5                                 |
| MP1710PDGC                | 20.22          | 10.87        | 11.43        | 4.74                   | 0.20                              | 0.94                   | 0.93                              | 0.184  | 245          | 128.5                                 |
| MP1710VDGC                | 20.22          | 10.87        | 11.43        | 4.74                   | 0.20                              | 0.94                   | 0.93                              | 0.184  | 245          | 128.5                                 |
| MP2010LDGC                | 22.78          | 10.87        | 11.43        | 5.13                   | 0.30                              | 1.54                   | 0.93                              | 0.278  | 245          | 180.1                                 |
| MP2010PDGC                | 22.78          | 10.87        | 11.43        | 5.13                   | 0.30                              | 1.54                   | 0.93                              | 0.278  | 245          | 180.1                                 |
| MP2010VDGC                | 22.78          | 10.87        | 11.43        | 5.13                   | 0.30                              | 1.54                   | 0.93                              | 0.278  | 245          | 180.1                                 |
| MP2310LDGC                | 25.91          | 10.80        | 11.48        | 5.60                   | 0.43                              | 2.38                   | 0.92                              | 0.389  | 245          | 233.7                                 |
| MP2310PDGC                | 25.91          | 10.80        | 11.48        | 5.60                   | 0.43                              | 2.38                   | 0.92                              | 0.389  | 245          | 233.7                                 |
| MP2310VDGC                | 25.91          | 10.80        | 11.48        | 5.60                   | 0.43                              | 2.38                   | 0.92                              | 0.389  | 245          | 233.7                                 |
| MP2510LDGC                | 27.79          | 17.27        | 11.48        | 7.01                   | 0.27                              | 1.89                   | 2.34                              | 0.631  | 245          | 118.4                                 |
| MP2510PDGC                | 27.79          | 17.27        | 11.48        | 7.01                   | 0.27                              | 1.89                   | 2.34                              | 0.631  | 245          | 118.4                                 |
| MP2510VDGC                | 27.79          | 17.27        | 11.48        | 7.01                   | 0.27                              | 1.89                   | 2.34                              | 0.631  | 245          | 118.4                                 |
| MP2610LDGC                | 28.32          | 14.15        | 11.48        | 6.61                   | 0.37                              | 2.48                   | 1.57                              | 0.589  | 245          | 174.6                                 |
| MP2610PDGC                | 28.32          | 14.15        | 11.48        | 6.61                   | 0.37                              | 2.48                   | 1.57                              | 0.589  | 245          | 174.6                                 |
| MP2610VDGC                | 28.32          | 14.15        | 11.48        | 6.61                   | 0.37                              | 2.48                   | 1.57                              | 0.589  | 245          | 174.6                                 |
| MP3210LDGC                | 34.95          | 19.86        | 11.48        | 8.54                   | 0.41                              | 3.52                   | 3.10                              | 1.275  | 245          | 148.3                                 |
| MP3210PDGC                | 34.95          | 19.86        | 11.48        | 8.54                   | 0.41                              | 3.52                   | 3.10                              | 1.275  | 245          | 148.3                                 |
| MP3210VDGC                | 34.95          | 19.86        | 11.48        | 8.54                   | 0.41                              | 3.52                   | 3.10                              | 1.275  | 245          | 148.3                                 |
| MP3310LDGC                | 36.07          | 12.95        | 11.48        | 7.49                   | 0.71                              | 5.34                   | 1.32                              | 0.939  | 245          | 292.9                                 |
| MP3310PDGC                | 36.07          | 12.95        | 11.48        | 7.49                   | 0.71                              | 5.34                   | 1.32                              | 0.939  | 245          | 292.9                                 |
| MP3310VDGC                | 36.07          | 12.95        | 11.48        | 7.49                   | 0.71                              | 5.34                   | 1.32                              | 0.939  | 245          | 292.9                                 |
| MP3510LDGC                | 38.10          | 16.69        | 11.48        | 8.48                   | 0.66                              | 5.58                   | 2.19                              | 1.439  | 245          | 238.9                                 |
| MP3510PDGC                | 38.10          | 16.69        | 11.48        | 8.48                   | 0.66                              | 5.58                   | 2.19                              | 1.439  | 245          | 238.9                                 |
| MP3510VDGC                | 38.10          | 16.69        | 11.48        | 8.48                   | 0.66                              | 5.58                   | 2.19                              | 1.439  | 245          | 238.9                                 |
| MP4010LDGC                | 43.05          | 19.86        | 11.48        | 9.76                   | 0.73                              | 7.15                   | 3.10                              | 2.270  | 245          | 231.1                                 |
| MP4010PDGC                | 43.05          | 19.86        | 11.48        | 9.76                   | 0.73                              | 7.15                   | 3.10                              | 2.270  | 245          | 231.1                                 |
| MP4010VDGC                | 43.05          | 19.86        | 11.48        | 9.76                   | 0.73                              | 7.15                   | 3.10                              | 2.270  | 245          | 231.1                                 |
| MP4510LDGC                | 48.13          | 19.86        | 11.48        | 10.55                  | 0.94                              | 9.91                   | 3.10                              | 2.912  | 245          | 274.4                                 |
| MP4510PDGC                | 48.13          | 19.86        | 11.48        | 10.55                  | 0.94                              | 9.91                   | 3.10                              | 2.912  | 245          | 274.4                                 |
| MP4510VDGC                | 48.13          | 19.86        | 11.48        | 10.55                  | 0.94                              | 9.91                   | 3.10                              | 2.912  | 245          | 274.4                                 |

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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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