



## S42000 SERIES

### SIZE CODE 4 QPL: M27/356



ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

Inductance Range (mH)	DCR (Ohms)	Current Rating (Amps)
0.025 to 20	0.018 to 12.4	0.22 to 6.16

### ELECTRICAL SPECIFICATIONS

- **Operating Temperature:** -55°C to +130°C
- **Storage Temperature:** -60°C to +135°C
- **Temperature Rise @ 90°C:** ≤ 30°C
- **Inductance at rated DC:** ≥ 80% of initial
- **Dielectric Withstanding Voltage:** 200 V<sub>RMS</sub>
- **Delta L:** ±2% over operating temperature range
- **Low Outgassing:** TML<1%
- **Different electrical values available upon request**

### FEATURES

- **Compact**, low profile, ideal for automatic placement
- Built to meet **MIL-STD-981** specifications
- **Terminations:** Tin-lead
- **Moisture, Shock and Immersion Resistant**
- **Magnetically shielded**
- **Other termination finishes available**
- **Order** to Mil-spec part number or VE part number

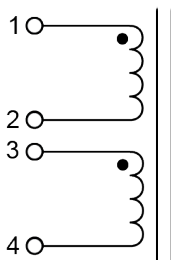
### APPLICATIONS

- Filter inductors
- Power supplies
- Ripple suppressors
- DC/DC converters
- Common mode chokes
- SEPIC converters
- Isolation transformers

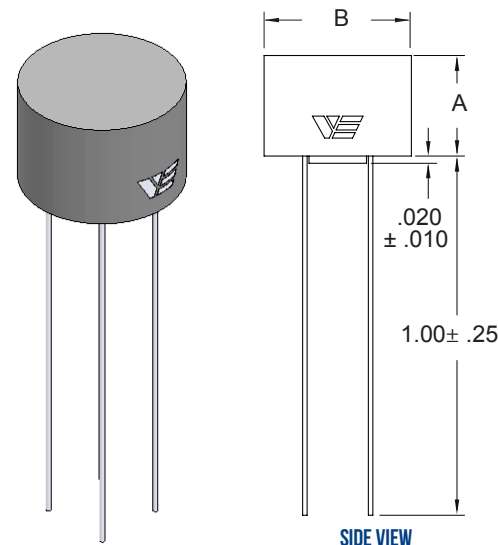
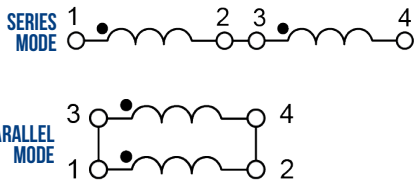
#### MIL-STD-981 Testing:

Add "-S" suffix for Class S Testing  
 Add "-B" suffix for Class B Testing

#### SCHEMATIC

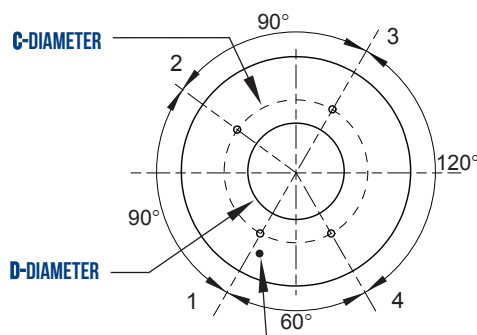


#### TYPICAL USER CONNECTIONS



SIZE CODE	A MAX	B MAX	C ± .010	D MAX	TERMINAL DIAMETER
4 (IN)	.500	.800	.560	.550	.016±.002
4 (MM)	12.70	20.32	14.22	14.00	0.41

#### TERMINAL CONFIGURATION BOTTOM VIEW



Dot identifies terminal 1. Terminals are clockwise from pin 1.

MARKINGS: LASER ETCH OR INK

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DATA TABLE

M27/356 Dash No.	Vanguard Part Number	Series Inductance (mH)*	Series DC Current max (Amps)	Series DCR (Ohms ±25%)	Parallel Inductance (mH)	Parallel DC Current max (Amps)	Parallel DCR (Ohms ±25%)
-04	S42650	20	0.22	12.4	5	0.44	3.1
-09	S42655	15	0.25	9.3	3.75	0.50	2.325
-14	S42660	10	0.31	6.2	2.5	0.62	1.55
-19	S42665	7.5	0.38	4.7	1.88	0.76	1.175
-24	S42670	5.0	0.47	3.1	1.25	0.94	0.775
-29	S42675	3	0.6	1.9	0.75	1.2	.475
-34	S42680	2	0.74	1.3	0.5	1.48	0.325
-39	S42685	1	1	0.62	0.25	2	0.155
-44	S42690	0.750	1.2	0.47	0.1875	2.4	0.1175
-49	S42695	0.500	1.47	0.31	0.125	2.94	0.0775
-54	S42700	0.250	2.08	0.16	0.0625	4.16	0.06
-59	S42705	0.100	3.08	0.07	0.025	6.16	0.018

Inductance measured at 10 kHz, 0.1 V<sub>RMS</sub>

\* Inductance tolerance +25/-5 %

**CUSTOM DESIGNS & MODIFICATIONS:**

Other electrical configurations and performance characteristics are available in various sizes and package types

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