



S42000 SERIES

SIZE CODE 2 QPL: M27/356



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_{RMS}
- **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

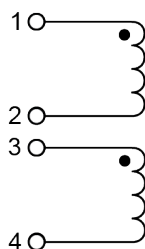
- Filter inductors
- Power supplies
- Ripple suppressors
- DC/DC converters
- Common mode chokes
- SEPIC converters
- Isolation transformers

MIL-STD-981 Testing:

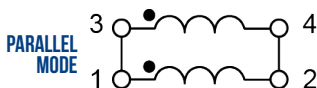
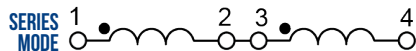
Add "-S" suffix for Class S Testing

Add "-B" suffix for Class B Testing

SCHEMATIC



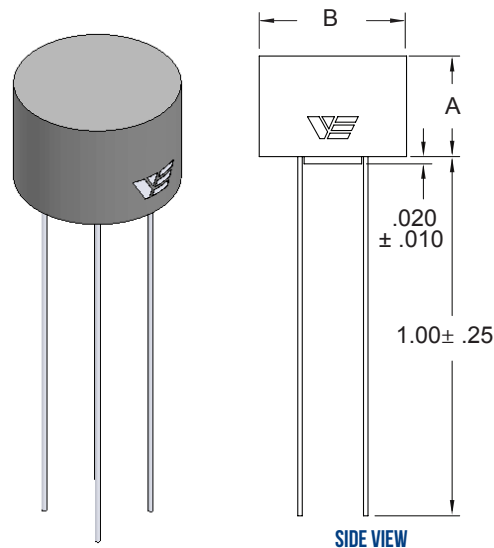
TYPICAL USER CONNECTIONS



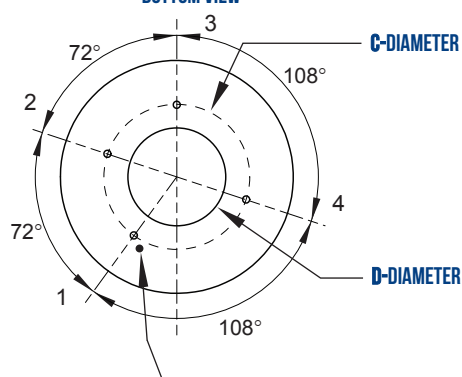
ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

Inductance Range (mH)	DCR (Ohms)	Current Rating (Amps)
0.01 to 20	0.018 to 29	0.10 to 4.06



SIZE CODE	A MAX	B MAX	C ± .010	D ± .010	TERMINAL DIAMETER
2 (IN)	.340	.500	.350	.250	.012±.002
2 (MM)	8.63	12.7	8.89	6.35	.31

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)*	DC Series Current max (Amps)	Series DCR (Ohms $\pm 25\%$)	Parallel Inductance (mH)	DC Parallel Current max (Amps)	Parallel DCR (Ohms $\pm 25\%$)
-02	S42648	20	0.10	29	5	0.20	7.25
-07	S42653	15	0.12	22	3.75	0.24	5.5
-12	S42658	10	0.14	14.6	2.5	0.28	3.65
-17	S42663	7.5	0.17	11	1.88	0.34	2.75
-22	S42668	5.0	0.21	7.3	1.25	0.42	1.825
-27	S42673	3	0.27	4.4	0.75	0.54	1.1
-32	S42678	2	0.33	2.9	0.5	0.66	0.725
-37	S42683	1	0.47	1.5	0.25	0.94	0.375
-42	S42688	0.750	0.54	1	0.1875	1.08	0.25
-47	S42693	0.500	0.66	0.66	0.125	1.32	0.165
-52	S42698	0.250	0.93	0.33	0.0625	1.86	0.0825
-57	S42703	0.100	1.35	0.17	0.025	2.7	0.043
-62	S42708	0.040	2.03	0.07	0.01	4.06	0.018

Inductance measured at 10 kHz, 0.1 V_{RMS}

* 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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