



S42000 SERIES

SIZE CODE 3 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

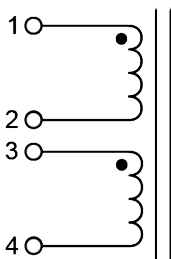
- Filter inductors
- Power supplies
- Ripple suppressors
- DC/DC converters
- Common mode chokes
- SEPIC converters
- Isolation transformers

MIL-STD-981 Testing:

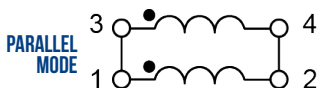
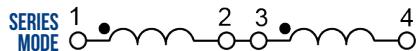
Add -"S" suffix for Class S Testing

Add -"B" suffix for Class B Testing

SCHEMATIC



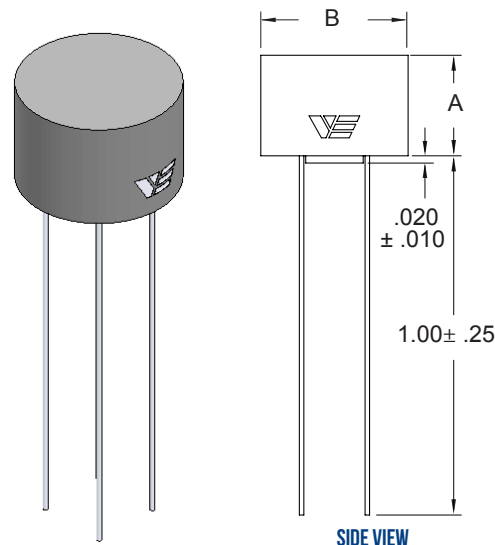
TYPICAL USER CONNECTIONS



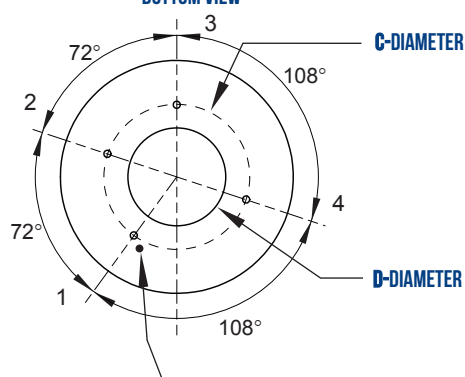
ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

Inductance Range (mH)	DCR (Ohms)	Current Rating (Amps)
0.01 to 20	0.015 to 20	0.14 to 5.36



SIZE CODE	A MAX	B MAX	C ± .010	D ± .010	TERMINAL DIAMETER
3 (IN)	.415	.630	.440	.340	.016±.002
3 (MM)	10.54	16.0	11.17	8.64	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 $\pm 25\%$)	Parallel Inductance (mH)	Parallel DC Current max (Amps)	Parallel DCR (Ohms $\pm 25\%$)
-03	S42649	20	0.14	20	5	0.28	5.0
-08	S42654	15	0.16	15	3.75	0.32	3.75
-13	S42659	10	0.20	10	2.5	0.40	2.5
-18	S42664	7.5	0.24	7.5	1.88	0.48	1.875
-23	S42669	5.0	0.30	5	1.25	0.60	1.25
-28	S42674	3	0.38	3	0.75	0.76	0.75
-33	S42679	2	0.47	2	0.5	0.94	0.5
-38	S42684	1	0.66	1	0.25	1.32	0.25
-43	S42689	0.750	0.76	0.75	0.1875	1.52	0.1875
-48	S42694	0.500	0.93	0.5	0.125	1.86	0.125
-53	S42699	0.250	1.3	0.25	0.0625	2.6	0.0625
-58	S41885	0.100	1.95	0.11	0.025	3.9	0.028
-63	S42709	0.040	2.68	0.06	0.01	5.36	0.015

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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