SP SERIES
RF WIDEBAND TRANSFORMER

AS9100 D CERTIFIED
ISO 9001 CERTIFIED
ITAR COMPLIANT

ELECTRICAL SPECIFICATIONS

- **Operating Temperature:** −55°C to +125°C
- **Storage Temperature:** −60°C to +130°C
- **Dielectric Withstanding Voltage:** 300 V_{AC}
- **Different electrical values available upon request**
- **Power Rating:** 250 mW
- **Outgassing compliant per ASTM E595** (TML <1%, CVCM <0.1%)

FEATURES

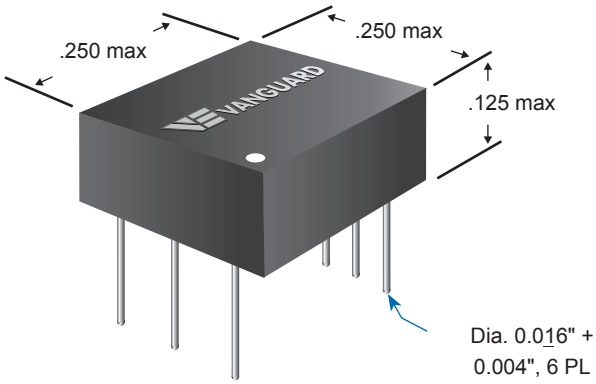
- **Compact**, low profile, ideal for automatic placement
- Built to meet **MIL-STD-981** and **MIL-T-55631** specifications
- **Low thermal expansion, Transfer Molded Package**
- **Terminations:** Tin-lead, RoHS
- Other termination finishes available
- **Welded Internal Connections**
- **Moisture, Shock and Immersion Resistant**
- **Resistance to Soldering Heat:** 265°C for 10 secs

MIL-STD-981

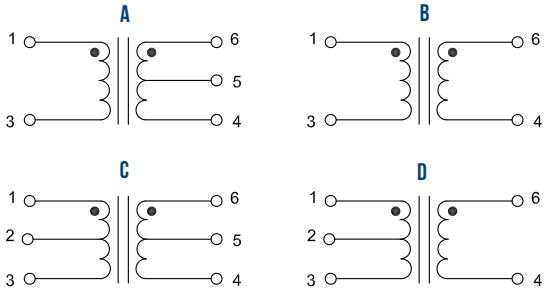
Bandwidth (MHz)	Max Insertion Loss @ 50MHz	Impedence Ratio
0.5 to 500	1 to 1.7	1:1 to 1:16

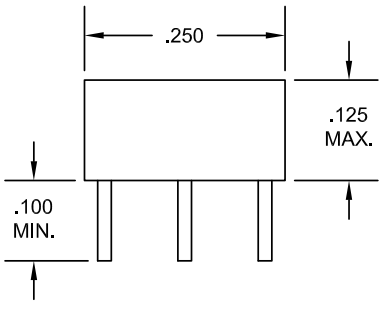
MARKINGS: LASER OR INK
ALL DIMENSIONS: INCHES

SMT AND GULLWING PACKAGES ALSO AVAILABLE

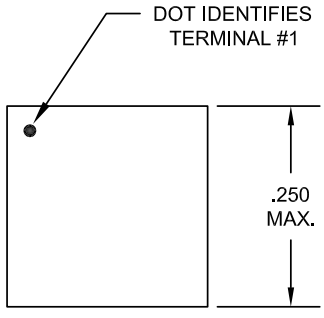


SCHEMATIC

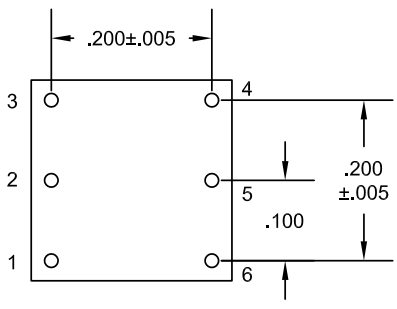




SIDE VIEW



TOP VIEW



BOTTOM VIEW

CUSTOM DESIGNS & MODIFICATIONS:

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

SP SERIES

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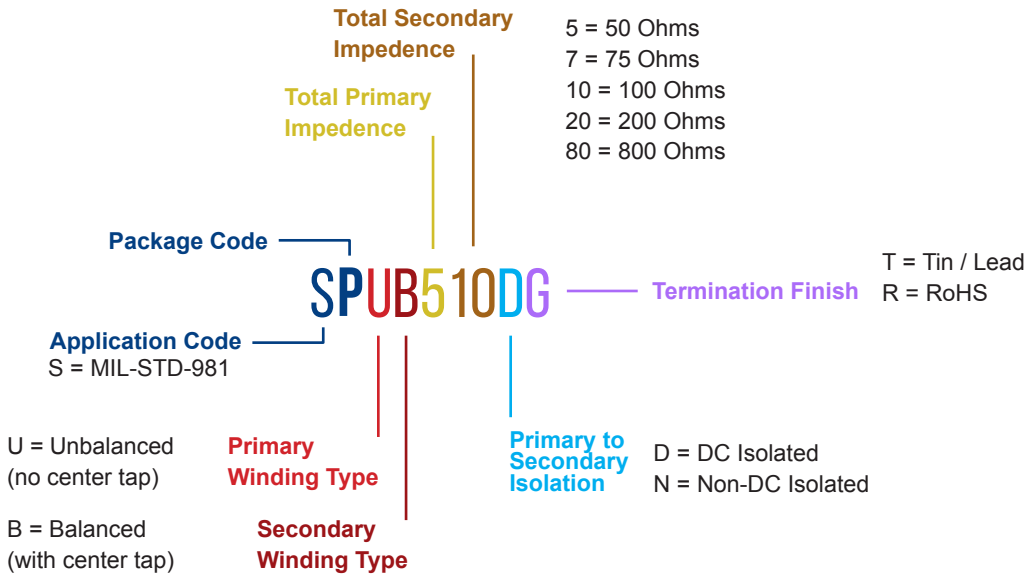
DATA TABLE

Vanguard P/N SP Series	Impedance Ratio Pri : Sec	Primary Center Tap	Secondary Center Tap	Insertion Loss @50 MHz max ref (dB)	VSWR @50 MHz max ref	Bandwidth min (MHz) 0.5 dB (Ripple)	Bandwidth min (MHz) 3 dB Points	Schematic
SPUB55D	1 : 1	No	Yes	1	1.3	5.0 - 130	1.0 - 390	A
SPUB57D	1 : 1.5	No	Yes	1.5	1.6	6.0 - 90	3.0 - 200	A
SPUB510D	1 : 2	No	Yes	1.1	1.36	2.0 - 100	0.5 - 230	A
SPUB520D	1 : 4	No	Yes	1	1.2	2.0 - 150	0.8 - 300	A
SPUB580D	1 : 16	No	Yes	1.2*	1.7*	12 - 35	2.0 - 140	A
SPUU55D	1 : 1	No	No	1	1.35	7.0 - 100	1.2 - 350	B
SPUU57D	1 :1.5	No	No	1.7	1.65	8.0 - 70	4.0 - 170	B
SPUU510D	1 : 2	No	No	1.3	1.4	3.0 - 85	0.9 - 200	B
SPUU520	1 : 4	No	No	1.1	1.25	4.0 - 130	1.0 - 250	B
SPUU580D	1 : 16	No	No	1.5*	1.95*	12 - 25	2.5 - 110	B
SPBB55D	1 : 1	Yes	Yes	1	1.3	5.0 - 130	1.0 - 390	C
SPBB57D	1 : 1.5	Yes	Yes	1.5	1.6	6.0 - 90	3.0 - 200	C
SPBB510D	1 : 2	Yes	Yes	1.1	1.36	2.0 - 100	0.5 - 230	C
SPBB520D	1 : 4	Yes	Yes	1	1.2	2.0 - 150	0.8 - 300	C
SPBB580D	1 : 16	Yes	Yes	1.2*	1.7*	12 - 35	2.0 - 140	C
SPBU55D	1 : 1	Yes	No	1	1.35	7.0 - 100	1.2 - 350	D
SPBU57D	1 :1.5	Yes	No	1.7	1.65	8.0 - 70	4.0 - 170	D
SPBU510D	1 : 2	Yes	No	1.3	1.4	3.0 - 85	0.9 - 200	D
SPBU520	1 : 4	Yes	No	1.1	1.25	4.0 - 130	1.0 - 250	D
SPBU580D	1 : 16	Yes	No	1.5*	1.95*	12 - 25	2.5 - 110	D

Inductance measured at 10 kHz, 0.1 V_{RMS} *Measured at 15 MHz

FOR ADDITIONAL CATALOG VALUES, PLEASE SEE THE BELOW PART NUMBERING SYSTEM OR CONTACT THE FACTORY:

PART NUMBER



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