S33000 SERIES

REF: M83446/10

AS9100 D CERTIFIED
ISO 9001 CERTIFIED
ITAR COMPLIANT

ALL PARTS AVAILABLE AS CLASS S OR CLASS B — MIL-STD-981

Inductance Range (uH)	Typical Q	Current Rating (mA)
0.01 to 1000	30 to 87	25 to 1000

ELECTRICAL SPECIFICATIONS

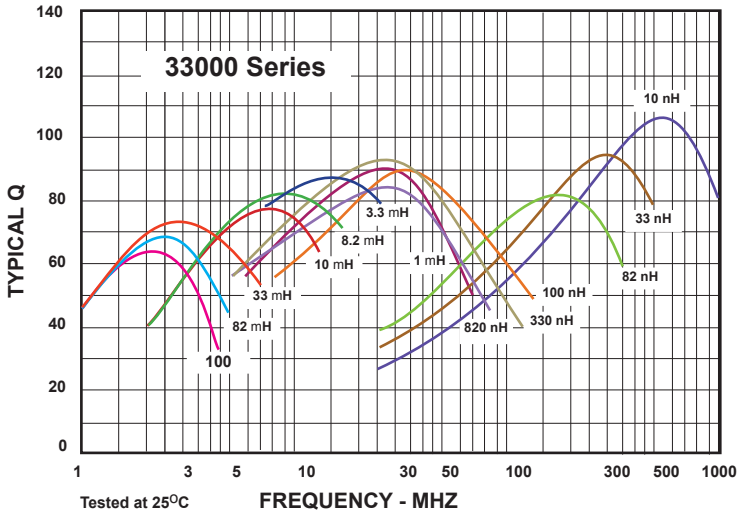
- **Inductance Range:** 0.01 uH to 1000 uH
- **Inductance Tolerance:** Standard is ±10%, tighter tolerance available upon request
- **Resistance to Solder Heat:** 260°C for 10 seconds
- **Operating Temperature:** -55°C to +125°C
- **Storage Temperature:** -60°C to +130°C
- **Temperature Rise:** 30°C Max at 90°C Ambient
- **Temperature Coefficient of Inductance**
  - P/N S33000 thru S33047: +1600 PPM/°C Max.
- **Outgassing meets NASA spec SP-R-0022A:** TML ≤ 1%, CVCM ≤ .1%

FEATURES

- **Internal Welded Terminations**
- **Terminations:** Tin-lead
- **Optional Terminations on Request:** Gold plated terminations
- **Tape and Reel Packaging Available**
- **Recommended Mounting Technique**
  - Reflow or Vapor Phase Soldering
  - Conductive Epoxy
  - Wire bonding (gold lead only)

APPLICATIONS

- **Additional Application Grades Available:**
  - Military Grade (MIL-PRF-83446)
  - High Temperature Grade (+200°C)
  - Commercial Grade



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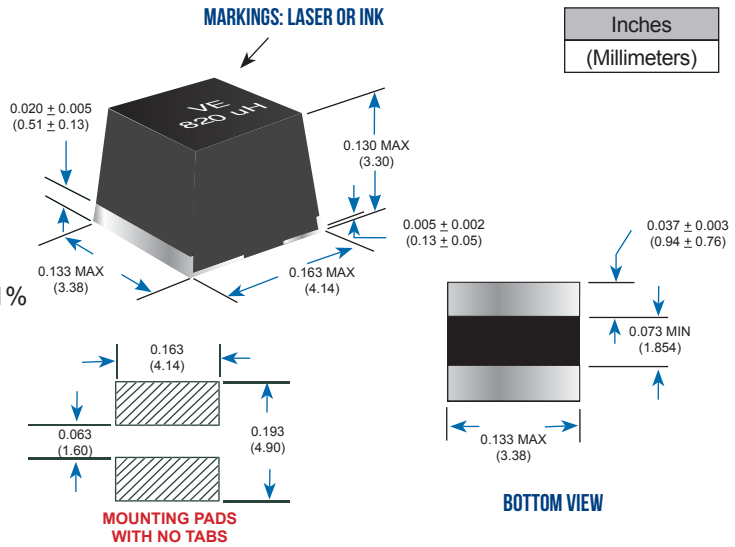
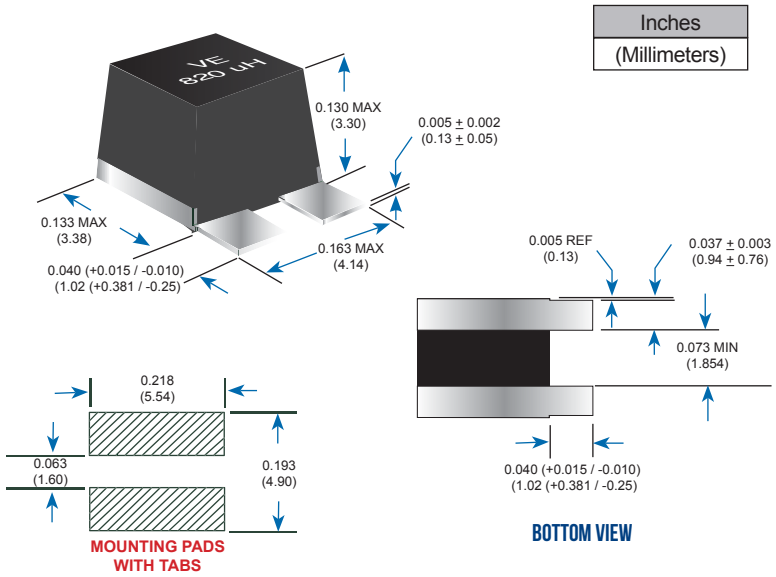


WITH TABS



S33000 SERIES

REV H

DATA TABLE

WITH TAB TERMINATIONS	WITHOUT TAB TERMINATIONS							
VE P/N	VE P/N	Inductance (uH)	Q (Min)	Q (Typ)	Test Freq (MHz)	SRF Min (MHz)	DCR Max (Ohms)	Current Max (mA)
S33000	S33000-NT	0.010	60	65	150	2000	0.04	1000
S33001	S33001-NT	0.012	70	82	150	1800	0.04	1000
S33002	S33002-NT	0.015	75	87	150	1500	0.04	1000
S33003	S33003-NT	0.018	75	87	150	1500	0.04	1000
S33004	S33004-NT	0.022	60	65	100	1300	0.05	1000
S33005	S33005-NT	0.027	60	70	100	1300	0.05	1000
S33006	S33006-NT	0.033	60	70	100	1000	0.05	1000
S33007	S33007-NT	0.039	60	70	100	1000	0.06	900
S33008	S33008-NT	0.047	65	75	100	800	0.06	900
S33009	S33009-NT	0.056	65	75	100	760	0.06	900
S33010	S33010-NT	0.068	65	75	100	700	0.07	840
S33011	S33011-NT	0.082	65	75	100	650	0.07	840
S33012	S33012-NT	0.100	65	77	50	570	0.07	840
S33013	S33013-NT	0.120	65	77	50	520	0.07	840
S33014	S33014-NT	0.150	75	87	50	400	0.08	790
S33015	S33015-NT	0.180	75	87	50	360	0.08	790
S33016	S33016-NT	0.220	70	80	50	320	0.08	790
S33017	S33017-NT	0.270	70	80	50	270	0.10	700
S33018	S33018-NT	0.330	70	80	50	240	0.10	700
S33019	S33019-NT	0.390	70	80	50	220	0.10	700
S33020	S33020-NT	0.470	70	80	25	190	0.14	590
S33021	S33021-NT	0.560	70	82	25	170	0.19	510
S33022	S33022-NT	0.680	70	83	25	160	0.26	430
S33023	S33023-NT	0.820	75	84	25	150	0.30	400
S33024	S33024-NT	1.00	75	87	25	130	0.34	380
S33025	S33025-NT	1.20	65	73	7.9	120	0.45	330
S33026	S33026-NT	1.50	65	73	7.9	110	0.57	290
S33027	S33027-NT	1.80	65	73	7.9	100	0.72	260
S33028	S33028-NT	2.20	65	73	7.9	80	0.9	230
S33029	S33029-NT	2.70	65	73	7.9	60	1.1	210
S33030	S33030-NT	3.30	60	70	7.9	50	1.2	200
S33031	S33031-NT	3.90	60	70	7.9	45	1.4	180
S33032	S33032-NT	4.70	60	70	7.9	42	1.6	170
S33033	S33033-NT	5.60	65	75	7.9	40	1.8	160
S33034	S33034-NT	6.80	65	75	7.9	37	2.4	140
S33035	S33035-NT	8.20	65	75	7.9	34	3.0	130
S33036 *	S33036-NT *	10.0	65	75	7.9	29	3.5	120
S33037 *	S33037-NT *	12.0	60	70	2.5	27	3.6	118
S33038	S33038-NT	15.0	60	70	2.5	22	3.7	115

CUSTOM DESIGNS & MODIFICATIONS:

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

S33000 SERIES

REV H

WITH TAB TERMINATIONS	WITHOUT TAB TERMINATIONS							
VE P/N	VE P/N	Inductance (uH)	Q (Min)	Q (Typ)	Test Freq (MHz)	SRF Min (MHz)	DCR Max (Ohms)	Current Max (mA)
S33039	S33039-NT	18.0	60	72	2.5	17	3.8	114
S33040	S33040-NT	22.0	60	72	2.5	16	3.9	113
S33041	S33041-NT	27.0	65	75	2.5	15	4	110
S33042	S33042-NT	33.0	65	75	2.5	14	5	100
S33043	S33043-NT	39.0	65	75	2.5	13	7	84
S33044	S33044-NT	47.0	70	78	2.5	12	8	79
S33045	S33045-NT	56.0	70	78	2.5	11	10	70
S33046 *	S33046-NT *	68.0	65	75	2.5	10	11	67
S33047 *	S33047-NT *	82.0	60	72	2.5	9	12	64
S33048 *	S33048-NT *	100	60	70	2.5	8	13	62
S33049 *	S33049-NT *	120	40	48	0.79	7	14	59
S33050 *	S33050-NT *	150	40	48	0.79	6	16	56
S33051 *	S33051-NT *	180	40	48	0.79	5	18	52
S33052 *	S33052-NT *	220	40	48	0.79	4	24	45
S33053 *	S33053-NT *	270	40	48	0.79	3.3	25	44
S33054 *	S33054-NT *	330	40	48	0.79	3.1	29	41
S33055 *	S33055-NT *	390	40	48	0.79	2.9	32	39
S33056 *	S33056-NT *	470	35	45	0.79	2.4	35	37
S33057 *	S33057-NT *	560	35	45	0.79	2.1	45	33
S33058 *	S33058-NT *	680	35	40	0.79	1.9	55	
S33059 *	S33059-NT *	820	30	36	0.79	1.8	70	26
S33060 *	S33060-NT *	1000	30	36	0.79	1.7	80	25

*** Note:** Part numbers noted are MIL-STD-981, Class "S" compliant with the exception of wire size. All other aspects are met 100%. Contact Vanguard for more information

VE PART NUMBER STRUCTURE KEY

EXAMPLE: S33001-NT-F-KS

TABS

Blank	With Tabs
NT	Without Tabs

TERMINATION

F	Tin Lead (Standard)
G	Gold

TOLERANCE

M	20%
K	10%
J	5%
***H**	3%
***G**	2%
***F**	1%

* Consult Factory

RELIABILITY

E	EDU
B	CLASS B
S	CLASS S

Tested per MIL-STD-981

S33000 SERIES

REV H