QPL M27-93027

MIL-SPEC/QPL-M27/93027 SERIES POWER INDUCTORS
DSCC DRAWING M27/93027

REQUIREMENTS: (When numbers in parentheses, i.e., (1-2) are used, they indicate the winding and the extreme terminals of the winding.)

Electrical ratings: See table I.

Design and construction:

Dimensions and configurations: See figure 1.

Case: Grade 5, encapsulated.

Terminals: The terminals shall be tin-lead plated phosphor bronze.

Weight: 1.25 ounces, maximum.

Altitude: 70,000 feet, maximum.

Operating temperature range: -55°C to +125°C.

Leadless device for minimum footprint.

Low EMI radiation.

Low thermal expansion permits mounting on most substrate materials.

Build to meet MIL-T-27 specifications.

Terminals meet solderability per MIL-STD-202, test condition 208.

Bond Strength: MIL-STD-883, method 2011, test condition F.

Force: 2 pounds.

Barometric pressure: MIL-STD-202, method 105, test condtion C, (70,000 feet), test voltage 100 V rms.

Insulation resistance: MIL-STD-202, method 302, 1,000 megohms minimum at 100 V dc.

Terminal strength: MIL-STD-202, method 211, test condition A, 2 pounds.

Dielectric withstanding voltage:

At sea level: 200 volts rms.

At reduced barometric pressure: 100 volts rms.

Vibration (high frequency): MIL-STD-202, method 204, test condition D.

Inductance drop 30% maximum at rated current.

Moisture resistance: MIL-STD-202, method 106, method of mounting shall be on a test substrate that provide test pieces on inch minimum separation.

Temperature rise: The temperature rise shall be 35°C at rated dc current.

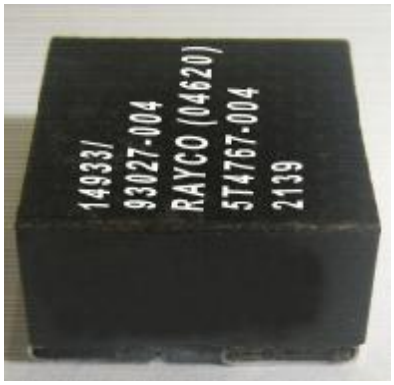
Marking location: Marking shall be on top of the case.

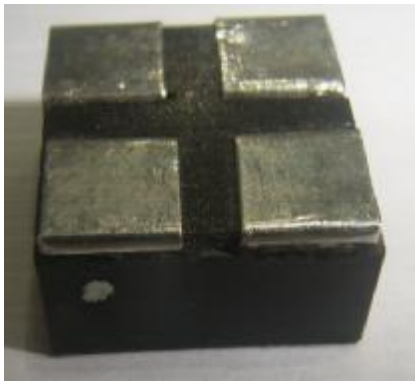
Space application: available to MIL-STD-981.

Outgassing: TML<1%.

Part or Identifying Number (PIN): 14933/93027-(dash number from table I), RAYCO (04620), 5T4767-(dash number from tabel I) and date code.

Qualification: Qualification testing and approval to M27/93027-040 shall be sufficient to grant qualification approval to M27/93027-001 through M27/93027-040 inclusive.





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TABEL I. ELECTRICAL CHARACTERISTICS.

5T4767-XX	SERIES			PARALLEL			CONFIGUR-ATION	POWER RATING
	INDUCTANCE ±10 PERCENT (mH)	RATED DC CURRENT (mA)	DC RESISTANCE (MAX) (OHM)	INDUCTANCE ±10 PERCENT (mH)	RATED DC CURRENT (mA)	DC RESISTANCE (MAX) (OHM)		(mW)
001	0.100	300	1.60	0.025	600	0.400	1	125
002	0.100	600	0.96	0.025	1200	0.240	2	250
003	0.100	780	0.37	0.025	1560	0.093	3	300
004	0.100	1350	0.21	0.025	2700	0.053	4	450
005	0.250	200	3.11	0.062	400	0.778	1	125
006	0.250	400	1.98	0.062	800	0.495	2	250
007	0.250	530	0.82	0.062	1060	0.205	3	300
008	0.250	930	0.41	0.062	1860	0.103	4	450
009	0.500	150	6.14	0.125	300	1.535	1	125
010	0.500	300	3.35	0.125	600	0.838	2	250
011	0.500	380	1.62	0.125	760	0.405	3	300
012	0.500	660	0.82	0.125	1320	0.205	4	450
013	0.750	120	9.45	0.187	240	2.363	1	125
014	0.750	250	5.20	0.187	500	1.300	2	250
015	0.750	310	2.50	0.187	620	0.625	3	300
016	0.750	540	1.25	0.187	1080	0.313	4	450
017	1.000	95	12.85	0.250	190	3.213	1	125
018	1.000	200	6.90	0.250	400	1.725	2	250
019	1.000	270	3.37	0.250	540	0.843	3	300
020	1.000	470	1.87	0.250	940	0.468	4	450
021	2.000	75	25.60	0.500	150	6.400	1	125
022	2.000	150	12.20	0.500	300	3.050	2	250
023	2.000	190	6.75	0.500	380	1.690	3	300
024	2.000	330	3.62	0.500	660	0.910	4	450
025	3.000	60	38.40	0.750	120	9.600	1	125
026	3.000	120	18.30	0.750	240	4.580	2	250
027	3.000	160	10.12	0.750	320	2.530	3	300
028	3.000	270	5.50	0.750	540	1.380	4	450
029	5.000	45	64.00	1.250	90	16.000	1	125
030	5.000	90	30.40	1.250	180	7.600	2	250
031	5.000	120	16.87	1.250	240	4.220	3	300
032	5.000	210	9.12	1.250	420	2.280	4	450
033	7.500	30	96.00	1.875	60	24.000	1	125
034	7.500	70	46.00	1.875	140	11.500	2	250
035	7.500	100	25.37	1.875	200	6.350	3	300
036	7.500	170	13.75	1.875	340	3.440	4	450
037	10.000	20	128.00	2.500	40	32.000	1	125
038	10.000	50	61.00	2.500	100	15.250	2	250
039	10.000	80	33.75	2.500	160	8.440	3	300
040	10.000	140	18.25	2.500	280	4.570	4	450

FIGURE 1. DIMENSIONS AND CONFIGURATIONS

SIZE	A max	B max	C	D	E	F	G	H
	MILLIMETERS (INCHES)	MILLIMETERS (INCHES)	MILLIMETERS (INCHES)	MILLIMETERS (INCHES)	MILLIMETERS (INCHES)	MILLIMETERS (INCHES)	MILLIMETERS (INCHES)	MILLIMETERS (INCHES)
1	6.60 (0.260)	5.84 (0.230)	1.78 (0.070)	2.16 (0.085)	3.94 (0.155)	3.94 (0.155)	2.54 (0.100)	2.54 (0.100)
2	10.41 (0.410)	5.84 (0.230)	3.05 (0.120)	3.43 (0.135)	6.48 (0.255)	6.48 (0.255)	4.57 (0.180)	4.06 (0.160)
3	10.41 (0.410)	7.87 (0.310)	3.05 (0.120)	3.43 (0.135)	6.48 (0.255)	6.48 (0.255)	4.57 (0.180)	4.06 (0.160)
4	13.59 (0.535)	7.87 (0.310)	3.43 (0.135)	5.08 (0.200)	8.51 (0.335)	8.51 (0.335)	6.35 (0.250)	6.35 (0.250)

THE TOLERANCE FOR ALL DIMENSIONS EXCEPT A & B SHALL BE ±0.25mm (0.010 inch).

mm	inches
0.25	0.010
0.64	0.025

NOTES:

1. DIMENSIONS ARE IN MILLIMETERS.
2. INCH-POUND EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY.
3. THE US GOVERNMENT PREFERRED SYSTEM OF MEASUREMENT IS THE METRIC SI SYSTEM. HOWEVER, SINCE THIS ITEM WAS ORIGINALLY DESIGNED USING INCH-POUND UNITS OF MEASUREMENT, IN THE EVENT OF CONFLICT BETWEEN THE METRIC AND INCH-POUND UNITS, THE INCH-POUND UNITS SHALL TAKE PRECEDENCE.