



ADJUSTABLE COILS 5SQ, KS & KM

Revision: A

Frontier Electronics Corp.[®]

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ADJUSTABLE COILS

1. 5SQ
2. 5SQSMD
3. KM5XXXXXXX (With Plastic Sleeve)
4. KS1XXXX (With Ferrite, Magnetically Shielded)
5. KM7XXX (Unshielded with Ferrite TH Core)
6. KM7XXX (With Ferrite TH Core and Plastic Sleeve)
7. KM7XXX (With Ferrite TH Core and Ferrite Sleeve)

General Information:

1. Excellent temperature coefficient.
2. For high frequency operation up to 1.0 GHz. (5SQ & 5SQSMD)
3. Unique winding configuration.
4. Special selected core for Hi-Q performance.
5. Inductance measured using HP4191A with HP16092A test fixture.
6. Q measured at L max value using HP4191A with HP16092A test fixture.
7. SRF measured without core using network Analyzer. (5SQ & 5SQSMD)
8. MSL: Level 1.

Applications:

1. RF filters,
2. Impedance matching circuits.
3. Set Top Boxes
4. Cables Modems
5. Automotive radar systems
6. Communication Devices
7. Radio Control

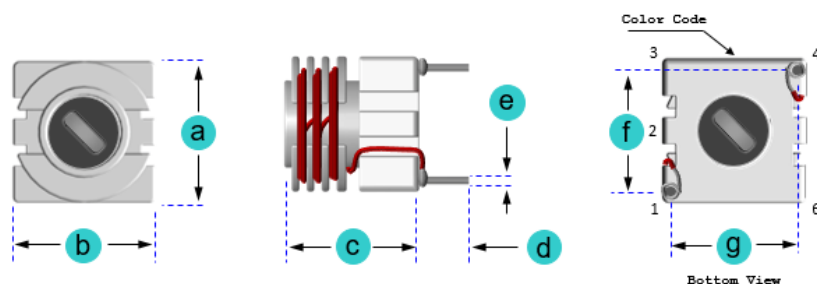
SERIES: 5SQ

Electrical Specifications:

P/N	Pin (S—F)	Test Frequency: 25.2 MHz				SRF Min. (MHz)	DCR Max. (mΩ)	Color Code
		L Min. (nH)	L Nom. (nH)	L Max. (nH)	Q (Min.) @L max.			
5SQ-01A	Pin (1-4)	27.5	28.5	29.5	40	1450	30.0	SILVER
5SQ-02A	Pin (1-4)	51	56	61	50	1350	35.0	GOLD
5SQ-03A	Pin (1-4)	80	95	110	65	1000	35.0	RED
5SQ-03	Pin (1-4)	85	95	105	70	1000	35.0	ORANGE
5SQ-04	Pin (1-4)	120	140	160	80	900	45.5	YELLOW
5SQ-05	Pin (1-4)	150	175	200	90	740	50.0	GREEN
5SQ-06	Pin (1-4)	185	225	265	90	590	57.5	BLUE
5SQ-07	Pin (1-4)	270	317	365	90	540	72.5	VIOLET
5SQ-08	Pin (1-4)	320	383	445	100	500	75.0	Black
5SQ-09	Pin (1-4)	400	465	530	100	450	85.0	WHITE

Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g
5SQ	5.45 (0.215)	5.45 (0.215)	5.80 (0.228)	3.0 (0.118)	Ø0.4 (0.016)	3.5 (0.138)	3.5 (0.138)
Tol.	+0.3 (0.012) -0.1 (0.004)	+0.3 (0.012) -0.1 (0.004)	±0.3 (0.012)	±0.3 (0.012)	+0.15 (0.006)	±0.3 (0.012)	±0.3 (0.012)



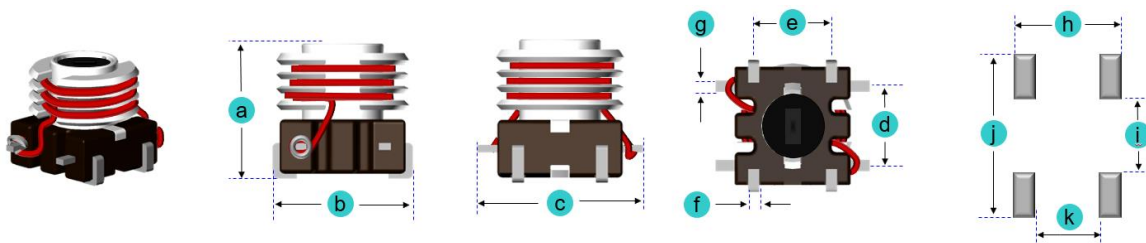
SERIES: 5SQSMD

Electrical Specifications:

P/N	# Turns	L Min. (nH)	L Max. (nH)	Q Min. @L max.	SRF Min. (MHz)	Color Code
5SQSMD -01	3.5	85	105	70	900	ORANGE
5SQSMD -02	4.5	125	155	80	800	YELLOW
5SQSMD -03	5.5	150	200	90	750	GREEN
5SQSMD -04	6.5	212	285	90	500	BLUE
5SQSMD -05	7.5	280	350	90	450	VIOLET
5SQSMD -06	8.5	325	445	100	400	BLACK
5SQSMD -07	9.5	400	530	100	350	WHITE
5SQSMD -08	3.5	85	105	65	900	RED
5SQSMD -09	1.5	28	31	40	1400	SILVER
5SQSMD -10	2.5	55	60	45	1300	GOLD

Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g	h	i	j	k
5SQ	5.9 (0.232)	6.3 (0.248)	7.5 (0.295)	3.5 (0.137)	3.5 (0.137)	0.5 (0.019)	0.5 (0.019)	4.5 (0.177)	3.4 (0.133)	6.5 (0.255)	2.1 (0.082)
Tol.	Max	Max	Max	±0.10 (0.004)	±0.10 (0.004)	±0.10 (0.004)	±0.10 (0.004)	±0.10 (0.004)	±0.10 (0.004)	±0.10 (0.004)	±0.10 (0.004)

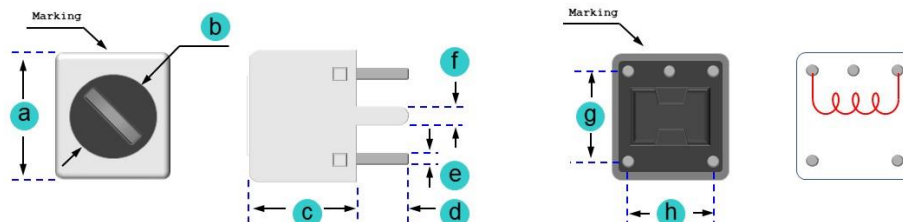


Electrical Specifications:

P/N	Marking	Tol.	L (μH) Nom.	Test Freq. (MHz)	Q Min.
KM57A1287N	287	±5%	1.0	7.96	55
KM57A1288N	288	±5%	1.2	7.96	55
KM57A1289N	289	±5%	1.5	7.96	55
KM57A1290N	290	±5%	1.8	7.96	55
KM57A1291N	291	±5%	2.2	7.96	55
KM57A1292N	292	±5%	2.7	7.96	55
KM57A1293N	293	±5%	3.3	7.96	55
KM57A1294N	294	±5%	3.9	7.96	55
KM57A1295N	295	±5%	4.7	7.96	55
KM57A1296N	296	±5%	5.6	7.96	55
KM57A1297N	297	±5%	6.8	7.96	55
KM57A1298N	298	±5%	8.2	7.96	55
KM57A1299N	299	±5%	10.0	2.52	55
KM57A1300N	300	±5%	12.0	2.52	55
KM57A1301N	301	±5%	15.0	2.52	55
KM57A1302N	302	±5%	18.0	2.52	55
KM57A1303N	303	±5%	22.0	2.52	55
KM57A1304N	304	±5%	27.0	2.52	55
KM51A1202N	202	±5%	33.0	2.52	40
KM51A1203N	203	±5%	39.0	2.52	40
KM51A1204N	204	±5%	47.0	2.52	40
KM51A1205N	205	±5%	56.0	2.52	40
KM51A1206N	206	±5%	68.0	2.52	40
KM51A1207N	207	±5%	82.0	2.52	40
KM51A1208N	208	±5%	100.0	0.796	40
KM51A1209N	209	±5%	120.0	0.796	40
KM51A1210N	210	±5%	150.0	0.796	40
KM51A1211N	211	±5%	180.0	0.796	40
KM51A1212N	212	±5%	220.0	0.796	40
KM51A1213N	213	±5%	270.0	0.796	40
KM51A1214N	214	±5%	330.0	0.796	40
KM51A1215N	215	±5%	390.0	0.796	40
KM51A1216N	216	±5%	470.0	0.796	40
KM51A1217N	217	±5%	560.0	0.796	40
KM51A1218N	218	±5%	680.0	0.796	40

Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g	h
KM57A/KM51A	5.7 (0.224)	Ø5.0 (0.20)	6.5 (0.256)	2.5 (0.098)	Ø0.4 (0.016)	0.9 (0.035)	3.5 (0.138)	3.5 (0.138)
Tol.	±0.3 (0.012)	Ref.	Max.	+1.0 (0.039) -0.5 (0.020)	±0.05 (0.002)	Typ.	±0.2 (0.008)	±0.2 (0.008)



SERIES: KS1XXXX (With Plastic Sleeve)

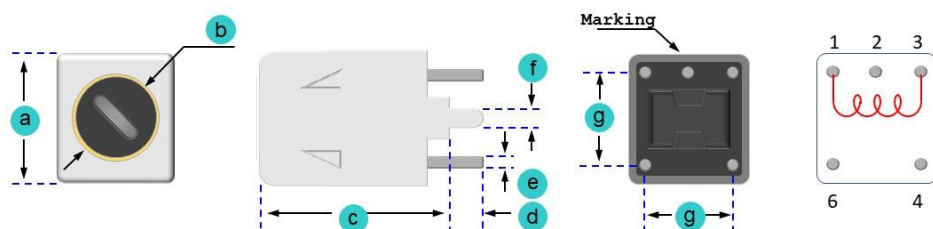
Electrical Specifications:

P/N	Marking	L (μH) Min.	L (μH) Nom.	L (μH) Max	Test Freq. (MHz)	Q Min.	DCR Max. (Ω)
KS1346N	46	0.094	0.10	0.106	25	27	0.124
KS1347N	47	0.113	0.12	0.127	25	27	0.124
KS1348N	48	0.141	0.15	0.159	25	30	0.151
KS1349N	49	0.169	0.18	0.191	25	30	0.151
KS1350N	50	0.207	0.22	0.233	25	35	0.176
KS1351N	51	0.254	0.27	0.286	25	35	0.198
KS1352N	52	0.310	0.33	0.350	25	40	0.248
KS1353N	53	0.367	0.39	0.413	25	40	0.271
KS1354N	54	0.442	0.47	0.498	25	40	0.291
KS1355N	55	0.526	0.56	0.594	25	40	0.317
KS1356N	56	0.612	0.68	0.748	25	40	0.333
KS1357N	57	0.738	0.82	0.902	25	45	0.368
KS1358N	58	0.90	1.0	1.1	25	45	0.396
KS1359N	59	1.1	1.2	1.3	7.9	27	0.412
KS1360N	60	1.4	1.5	1.7	7.9	27	0.466
KS1361N	61	1.6	1.8	2.0	7.9	27	0.544
KS1362N	62	2.0	2.2	2.4	7.9	27	0.595
KS1363N	63	2.4	2.7	3.0	7.9	27	0.898
KS1364N	64	3.0	3.3	3.6	7.9	27	1.04
KS1365N	65	3.5	3.9	4.3	7.9	27	1.12
KS1366N	66	4.2	4.7	5.2	7.9	27	1.38
KS1367N	67	5.0	5.6	6.2	7.9	27	1.42
KS1368N	68	6.1	6.8	7.5	7.9	27	1.49
KS1369N	69	7.4	8.2	9.0	7.9	27	1.65
KS1370N	70	9.0	10	11	7.9	27	2.42
KS1371N	71	10	12	14	2.5	20	2.75
KS1372N	72	13	15	17	2.5	20	3.71
KS1373N	73	15	18	21	2.5	20	4.01
KS1374N	74	19	22	25	2.5	20	7.37
KS1375N	75	23	27	31	2.5	20	8.48
KS1376N	76	28	33	38	2.5	20	13.34
KS1377N	77	33	39	45	2.5	20	14.72
KS1378N	78	40	47	54	2.5	20	16.42
KS1379N	79	48	56	64	2.5	20	17.76
KS1380N	80	58	68	78	2.5	20	19.76
KS1381N	81	70	82	94	2.5	20	22.01
KS1382N	82	85	100	115	2.5	20	24.25

Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g
KS1346N to KS1382N	7.5 (0.295)	5.2 (0.205)	11.6 (0.457)	3.5 (0.138)	0.5 (0.020)	1.0 (0.039)	4.5 (0.177)
Tol.	±0.5 (0.020)	+0 (0) -0.3 (0.012)	±0.8 (0.031)	+1.0 (0.039) -0.5 (0.020)	±0.05 (0.002)	±0.2 (0.008)	±0.3 (0.012)

With Plastic Sleeve



ADJUSTABLE COILS

SERIES: KS1XXXX (With Ferrite, Magnetically Shielded)

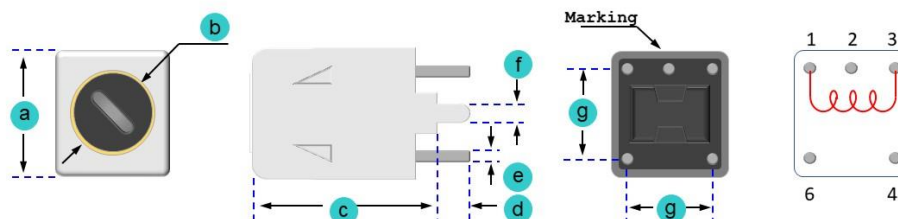
Electrical Specifications:

P/N	Marking	L (μH) Min.	L (μH) Nom.	L (μH) Max.	Test Freq. (MHz)	Q Min.	DCR Max. (Ω)
KS1383N	83	0.128	0.15	0.173	25.0	40	0.124
KS1383N	83	0.128	0.15	0.173	25.0	40	0.124
KS1384N	84	0.153	0.18	0.207	25.0	45	0.124
KS1385N	85	0.187	0.22	0.253	25.0	45	0.151
KS1386N	86	0.230	0.27	0.311	25.0	50	0.151
KS1387N	87	0.281	0.33	0.380	25.0	50	0.151
KS1388N	88	0.332	0.39	0.449	25.0	55	0.176
KS1389N	89	0.400	0.47	0.541	25.0	55	0.198
KS1390N	90	0.476	0.56	0.644	25.0	60	0.198
KS1391N	91	0.544	0.68	0.816	25.0	60	0.248
KS1392N	92	0.656	0.82	0.984	25.0	60	0.271
KS1393N	93	0.800	1.00	1.20	25.0	60	0.317
KS1394N	94	1.00	1.20	1.40	7.9	45	0.333
KS1395N	95	1.20	1.50	1.80	7.9	45	0.368
KS1396N	96	1.40	1.80	2.20	7.9	45	0.396
KS1397N	97	1.80	2.20	2.60	7.9	45	0.412
KS1398N	98	2.20	2.70	3.20	7.9	45	0.466
KS1399N	99	2.60	3.30	4.00	7.9	40	0.544
KS1400N	00	3.10	3.90	4.70	7.9	40	0.595
KS1401N	01	3.80	4.70	5.60	7.9	40	0.898
KS1402N	02	4.50	5.60	6.70	7.9	40	1.04
KS1403N	03	5.40	6.80	8.20	7.9	35	1.04
KS1404N	04	6.60	8.20	9.80	7.9	35	1.12
KS1405N	05	8.00	10.00	12.00	7.9	35	1.38
KS1406N	06	9.00	12.00	15.00	2.5	35	1.49
KS1407N	07	11.00	15.00	19.00	2.5	35	1.65
KS1408N	08	14.00	18.00	23.00	2.5	35	2.42
KS1409N	09	17.00	22.00	28.00	2.5	35	2.75
KS1410N	10	20.00	27.00	34.00	2.5	40	3.71
KS1411N	11	25.00	33.00	41.00	2.5	40	3.71
KS1412N	12	29.00	39.00	49.00	2.5	40	4.01
KS1413N	13	35.00	47.00	59.00	2.5	40	7.37
KS1414N	14	42.00	56.00	70.00	2.5	40	8.48
KS1415N	15	51.00	68.00	85.00	2.5	40	13.34
KS1416N	16	65.00	82.00	103.00	2.5	40	14.72
KS1417N	17	75.00	100.00	125.00	2.5	40	16.42
KS1418N	18	90.00	120.00	150.00	2.5	40	17.76
KS1419N	19	113.00	150.00	188.00	2.5	40	19.76
KS1420N	20	135.00	180.00	225.00	2.5	40	22.01
KS1421N	21	165.00	220.00	275.00	2.5	40	24.25

Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g
KS1383N to KS1421N	7.5 (0.295)	Ø5.2 (0.205)	11.6 (0.457)	3.5 (0.138)	Ø0.5 (0.020)	1.0 (0.039)	4.5 (0.177)
Tol.	±0.5 (0.020)	±0.5 (0.020)	±0.5 (0.020)	+1.0 (0.039) -0.5 (0.020)	+0.2 (0.008) -0.1 (0.004)	±0.2 (0.008)	±0.3 (0.012)

With Ferrite, Magnetically Shielded



ADJUSTABLE COILS

SERIES: KM7XXX (Unshielded with Ferrite TH Core)

Electrical Specifications:

Unshielded with Ferrite TH Core

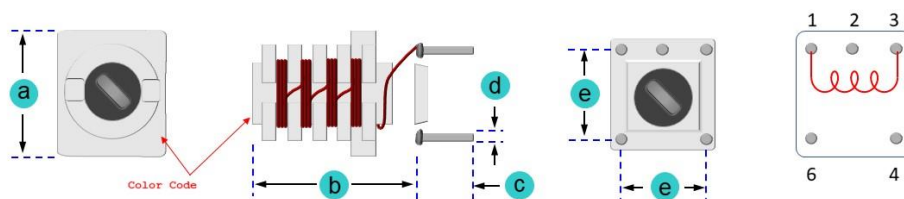
P/N	Color	L (μH) Min.	L (μH) Nom.	L (μH) Max.	Test Freq. (MHz)	Q (Min.)
KM703N	Brown	0.80	1.2	1.70	7.9	47
KM704N	Red	1.25	2.0	2.75	7.9	48
KM705N	Orange	1.75	2.9	4.00	7.9	48
KM706N	Yellow	2.40	3.9	5.40	7.9	47
KM707N	Green	3.50	5.6	7.80	7.9	47
KM708N	Blue	4.70	7.8	10.6	7.9	46
KM709N	Violet	7.40	11.5	15.6	2.5	38
KM710N	Gray	11	18.2	25	2.5	40
KM711N	White	16	25.3	35	2.5	40
KM712N	Black	22	36.5	50	2.5	40
KM713N	Brown *	33	52.5	72	2.5	39
KM714N	Red *	46	74.8	103	2.5	51
KM715N	Orange *	66	100	136	0.79	40
KM716N	Yellow *	95	146	198	0.79	44
KM717N	Green *	136	216	297	0.79	40
KM718N	Blue *	198	312	426	0.79	45
KM719N	Violet *	286	530	630	0.79	33
KM720N	Gray *	418	790	927	0.79	38

*- Denotes Color Dot

Dimensions: mm (Inch)

Series	a	b	c	d	e
KM703N to KM720N	9.8 (0.386)	12.5 (0.492)	3.5 (0.138)	Ø0.7 (0.028)	7.0 (0.276)
Tol.	±0.5 (0.020)	±0.5 (0.020)	+1.0 (0.039) -0.5 (0.020)	+0.2 (0.008) -0.1 (0.004)	±0.3 (0.012)

Unshielded with Ferrite TH Core



SERIES: KM7XXX (With Ferrite TH Core and Plastic Sleeve)

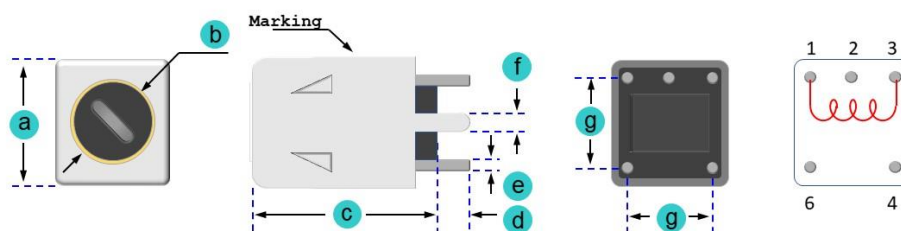
Electrical Specifications:

P/N	Marking	L (μH) Min.	L (μH) Nom.	L (μH) Max	Test Freq. (MHz)	Q (Min.)
KM721N	21N	0.70	0.82	0.94	7.9	65
KM722N	22N	1.05	1.23	1.41	7.9	37
KM723N	23N	1.50	1.75	2.00	7.9	40
KM724N	24N	2.04	2.4	2.76	7.9	40
KM725N	25N	2.90	3.4	3.90	7.9	39
KM726N	26N	4.25	5.0	5.75	7.9	38
KM727N	27N	6.00	7.1	8.20	7.9	35
KM728N	28N	9.40	11	12.6	2.5	25
KM729N	29N	12.8	15	17.2	2.5	25
KM730N	30N	18.7	22	25.3	2.5	25
KM731N	31N	26.4	31	35.6	2.5	25
KM732N	32N	37.4	44	50.6	2.5	29
KM733N	33N	52.7	62	71.3	2.5	30
KM734N	34N	79.0	92	105.0	2.5	28
KM735N	35N	108.8	128	147.2	0.79	18
KM736N	36N	155	182	208	0.79	20
KM737N	37N	230	270	310	0.79	16
KM738N	38N	336	390	450	0.79	18

Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g
KM721N to KM738N	10.2 (0.402)	Ø6.0 (0.236)	12.6 (0.496)	3.5 (0.138)	Ø0.7 (0.028)	1.5 (0.059)	7.0 (0.276)
Tol.	±0.5 (0.020)	±0.5 (0.020)	±0.5 (0.020)	+1.0 (0.039) -0.5 (0.020)	+0.2 (0.008) -0.1 (0.004)	±0.2 (0.008)	±0.3 (0.012)

With Ferrite TH Core and Plastic Sleeve



ADJUSTABLE COILS

SERIES: KM7XXX (With Ferrite TH Core and Ferrite Sleeve)

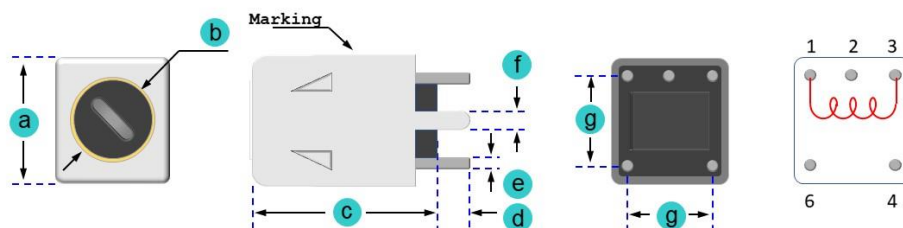
Electrical Specifications:

P/N	Marking	L (μH) Min.	L (μH) Nom.	L (μH) Max	Test Freq. (MHz)	Q (Min.)
KM739N	39N	0.85	1.04	2.00	7.9	43
KM740N	40N	1.27	2.25	3.25	7.9	44
KM741N	41N	1.83	3.25	4.60	7.9	41
KM742N	42N	2.48	4.50	6.40	7.9	40
KM743N	43N	3.58	6.50	9.30	7.9	40
KM744N	44N	5.00	8.80	12.70	7.9	38
KM745N	45N	7.70	13.0	18.40	2.5	30
KM746N	46N	12	20.9	30	2.5	35
KM747N	47N	16	29.4	42	2.5	34
KM748N	48N	25	42.3	60	2.5	32
KM749N	49N	36	62.8	90	2.5	30
KM750N	50N	48	87.2	126	2.5	42
KM751N	51N	72	116	163	0.79	35
KM752N	52N	102	168	238	0.79	36
KM753N	53N	147	252	360	0.79	38
KM754N	54N	215	312	522	0.79	45
KM755N	55N	303	530	765	0.79	33
KM756N	56N	440	790	1143	0.79	38

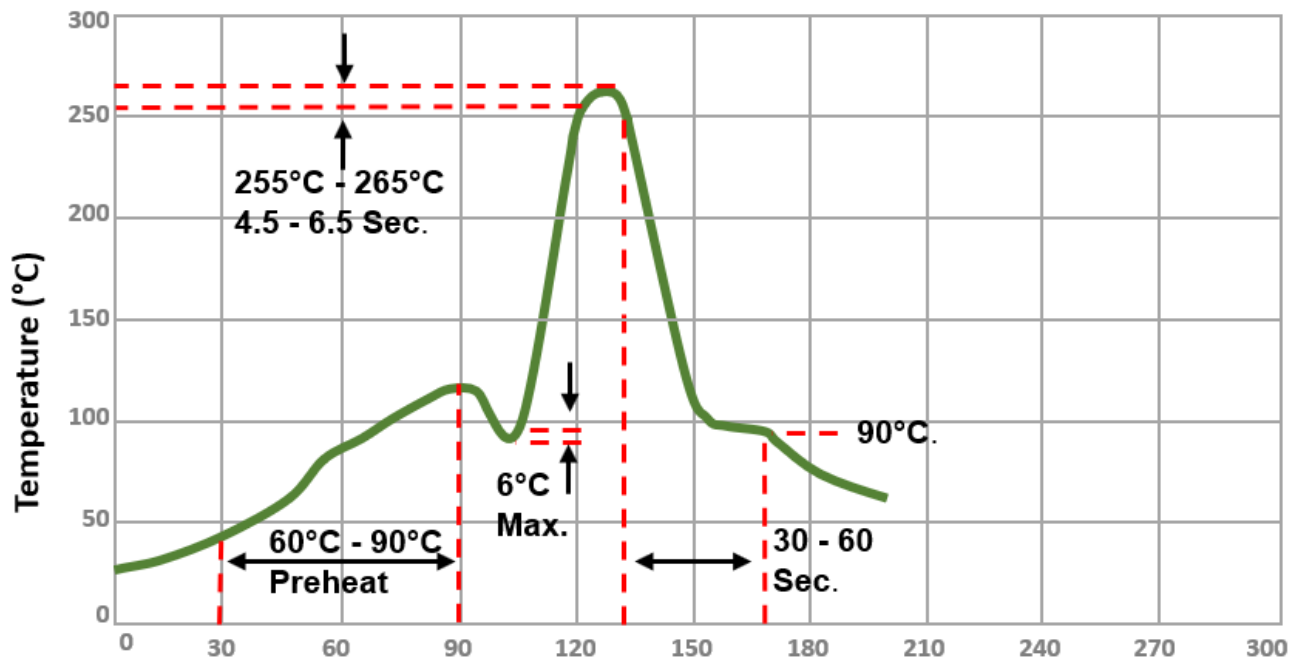
Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g
KM739N to KM756N	10.2 (0.402)	Ø6.0 (0.236)	12.6 (0.496)	3.5 (0.138)	Ø0.7 (0.028)	1.5 (0.059)	7.0 (0.276)
Tol.	±0.5 (0.020)	±0.5 (0.020)	±0.5 (0.020)	+1.0 (0.039) -0.5 (0.020)	+0.2 (0.008) -0.1 (0.004)	±0.2 (0.008)	±0.3 (0.012)

With Ferrite TH Core and Ferrite Sleeve



THROUGH HOLE SOLDER PROFILE



SMD SOLDER PROFILE

