Selection Guide - Power Inductor - KARSON(嘉成電子)

	SMD Inductor					**DIP** Inductor					
	Karson P/N	Dimension (mm)	DCR (mΩ) TYP	Idc (Amp)	Isat (Amp)	Karson P/N	Dimension (mm)	Pitch (mm)	DCR (mΩ) TYP	Idc (Amp)	Isat (Amp)
0.22 uH	KJ0730-R22M	6.6*7.5*3.1	2.5	17.6	35	KQ10VC-R22M	10*12.5*7.5	8	0.5	36	56
0.33 uH	KJ0730-R33M	6.6*7.5*3.1	3.5	15	27	KQ10VC-R33M	10*12.5*8.6	8	0.7	31	48
0.39 uH	KJ1040-R39M	10*11.5*4.1	1.2	25.6	40	KQ10VC-R39M	10*12.5*8.6	8	0.7	31	43
						KQ13VC-R39M	13*15.5*9.5	10	0.6	37	54
0.47 uH	KJ0730-R47M	6.6*7.5*3.1	4.0	14	24	KQ10VC-R47M	10*12.5*10	8	0.9	28	40
	KJ1040-R47M	10*11.5*4.1	1.3	24.8	38	KQ13VC-R47M	13*15.5*9.5	10	0.65	36	50
	KJ1350-R47M	12.7*13.8*5	1.1	27	40						
	KJ1365-R47M	12.7*13.8*6.5	0.7	35	50						
0.56 uH	KJ1040-R56M	10*11.5*4.1	1.6	22.5	35	KQ10VC-R56M	10*12.5*10	8	0.9	28	38
	KJ1350-R56M	12.7*13.8*5	1.3	24.8	38	KQ13VC-R56M	13*15.5*9.5	10	0.65	36	50
0.68 uH	KJ0730-R68M	6.6*7.5*3.1	5.0	12.6	22	KQ10VC-R68M	10*12.5*10	8	0.9	28	36
	KJ1040-R68M	10*11.5*4.1				KQ13VC-R68M	13*15.5*11	10	0.78	34	48
	KJ1350-R68M	12.7*13.8*5	1.5	23	36						
0.82 uH	KJ0730-R82M	6.6*7.5*3.1	6.7	11	21	KQ10VC-R80M	10*12.5*10	8	1.25	24	34
	KJ1350-R82M	12.7*13.8*5	1.8	21	34	KQ13VC-R80M	13*15.5*11	10	0.86	32	45
1.0 uH	KJ0730-1R0M	6.6*7.5*3.1	9.0	9.5	18	KQ10VC-1R0M	10*12.5*10	8	1.75	20	32
	KJ0760-1R0M	6.6*7.5*6	5.2	12.4	17	KQ13VC-R90M	13*15.5*11	10	0.86	32	45
	KJ1040-1R0M	10*11.5*4.1	3.0	16.3	28	KQ13VC-1R0M	13*15.5*10	10	1.15	27	40
	KJ1350-1R0M	12.7*13.8*5	2.0	20	32						
	KJ1370-1R0M	12.7*13.8*7	1.4	26	35						
1.2 uH	KJ1370-1R2M	12.7*13.8*7	1.7	23	32	KQ13VC-1R2M	13*15.5*10	10	1.20	26	40

Note 1: All test data is referenced to 25℃ ambient.

Note 2: Operating Temperature Range -25℃ to +125℃

Note 3: Idc: DC current(A) that will cause an approximate ΔT of 40 or 50℃

Note 4: Isat: DC current(A) that will cause Lo to drop approximately 20%

Note 5: See PAGE 2/2.

Selection Guide - Power Inductor - KARSON(嘉成電子)

	SMD Inductor					**DIP** Inductor					
	Karson P/N	Dimension (mm)	DCR (mΩ) TYP	Idc (Amp)	Isat (Amp)	Karson P/N	Dimension (mm)	Pitch (mm)	DCR (mΩ) TYP	Idc (Amp)	Isat (Amp)
1.5 uH	KJ0730-1R5M	6.6*7.5*3.1	14	7.7	14	KQ10VC-1R5M	10*12.5*10	8	3.0	16	30
	KJ1040-1R5M	10*11.5*4.1	4.0	14.2	24						
	KJ1350-1R5M	12.7*13.8*5	3.0	16.8	26						
	KJ1370-1R5M	12.7*13.8*7	2.0	21	30						
2.2 uH	KJ0730-2R2M	6.6*7.5*3.1	18	6.8	12	KQ10VC-2R2M	10*12.5*10	8	4.3	13.6	24
	KJ1040-2R2M	10*11.5*4.1	5.0	12.6	18						
	KJ1370-2R2M	12.7*13.8*7	3.0	17	26						
2.6 uH	KJ0730-2R6M	6.6*7.5*3.1	23	6	10	KQ10VC-2R8M	10*12.5*10	8	5.6	12.3	20
	KJ0760-2R6M	6.6*7.5*6	10	9	14						
	KJ1040-2R6M	10*11.5*4.1	5.6	12	16.5						
3.3 uH	KJ0730-3R3M	6.6*7.5*3.1	28	5.5	10	KQ10VC-3R3M	10*12.5*10	8	6.8	11.2	16
	KJ1040-3R3M	10*11.5*4.2	8.5	10	14.5						
	KJ1370-3R3M	12.7*13.8*7	4.0	15.6	22						
4.7 uH	KJ0730-4R7M	6.6*7.5*3.1	36	4.8	8	KQ10VC-4R7M	10*12.5*10	8	8.8	10	15
	KJ0760-4R7M	6.6*7.5*6	25	6	9						
	KJ1040-4R7M	10*11.5*4.2	14	7.8	10.8						
	KJ1370-4R7M	12.7*13.8*7	6.3	12.3	18						

Note 5:

The part temperature (ambient+temp rise) should not exceed 125℃ under worse case operating conditions.
Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provision all affect the part temperature.
Part temperature should be verified in the end application.

<== SMD

DIP ==>

REV: S5

DATE:2005.08.30

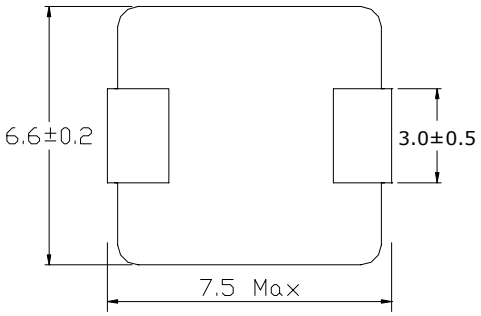
KARSON ELECTRONICS CO., LTD.

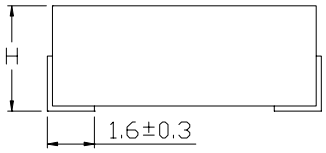
MANUFACTURER AND SUPPLIER OF IRON POWDER CORES.

PRODUCT: SMD Inductor **[Comply with RoHS]**

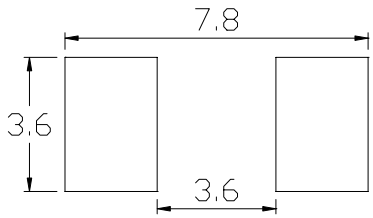
MODEL: KJ07xx series

PHYSICAL DIMENSION: [Unit: mm]





RECOMMENDED LAYOUT: [Unit: mm]



GENERAL SPECIFICATIONS:

P/N	L0 Inductance µH ±20% @0A	Height	DCR (mΩ)		Heat Rating Current	Saturation Current
		mm [Max]	[Typical]	[Max]	Idc (Amp DC) Typical	Isat (Amp DC) Typical
KJ0730-R22M	0.22	3.1	2.5	3.0	17.6	35
KJ0730-R33M	0.33	3.1	3.5	4.0	15	27
KJ0730-R47M	0.47	3.1	4.0	4.5	14	24
KJ0730-R68M	0.68	3.1	5.0	5.6	12.6	22
KJ0730-R82M	0.82	3.1	6.7	7.5	11	21
KJ0730-1R0M	1.0	3.1	9.0	10	9.5	18
KJ0730-1R5M	1.5	3.1	14	16	7.7	14
KJ0730-2R2M	2.2	3.1	18	21	6.8	12
KJ0730-2R6M	2.6	3.1	23	26	6	10
KJ0730-3R3M	3.3	3.1	28	31	5.5	10
KJ0730-4R7M	4.7	3.1	36	40	4.8	8
KJ0760-1R0M	1.0	6	5.2	5.8	12.4	17
KJ0760-2R6M	2.6	6	10	12	9	14
KJ0760-4R7M	4.7	6	25	29	6	9

Test condition @ 100KHz, 0.1Vrms, 25°C ambient

Idc: DC current(A) that will cause an approximate ΔT of 50℃

Isat: DC current(A) that will cause Lo to drop approximately 20%

Operating Temperature Range: -25℃ to +125℃

REV: S5

DATE:2005.08.30

KARSON ELECTRONICS CO., LTD.

MANUFACTURER AND SUPPLIER OF IRON POWDER CORES.

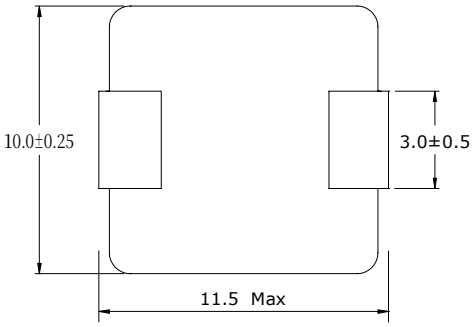
PRODUCT: SMD Power Inductor **[Comply with RoHS]**

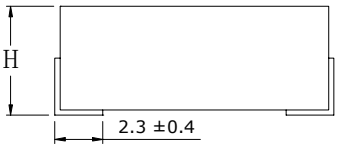
MODEL: KJ10xx series

FEATURES:

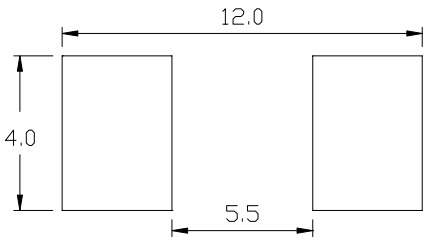
· Ultra low buzz noise,due to composite construction.
· Low DCR, Lower Loss, Low profile package with Large Current Design.
· Lead (Pb) free meet RoHS standard.

PHYSICAL DIMENSION: [Unit: mm]





RECOMMENDED LAYOUT: [Unit: mm]



GENERAL SPECIFICATIONS:

P/N	L0 Inductance μH ±20% @0A	Height	DCR (mΩ)		Heat Rating Current	Saturation Current
		mm [Max]	[Typical]	[Max]	Idc (Amp DC)	Isat (Amp DC)
					Typical	Typical
KJ1040-R39M	0.39	4.1	1.2	1.4	25.6	40
KJ1040-R47M	0.47	4.1	1.3	1.5	24.8	38
KJ1040-R56M	0.56	4.1	1.6	1.8	22.5	35
KJ1040-R68M	0.68	4.1				
KJ1040-1R0M	1.0	4.2	3.0	3.5	16.3	28
KJ1040-1R5M	1.5	4.2	4.0	4.8	14.2	24
KJ1040-2R2M	2.2	4.2	5.0	6.0	12.6	18
KJ1040-2R6M	2.6	4.2	5.6	6.5	12	16.5
KJ1040-3R3M	3.3	4.2	8.5	10.0	10	14.5
KJ1040-4R7M	4.7	4.2	14	16.5	7.8	10.8

Test condition @ 100KHz, 0.1Vrms, 25°C ambient

Idc: DC current(A) that will cause an approximate ΔT of 40℃

Isat: DC current(A) that will cause Lo to drop approximately 20%

Operating Temperature Range: -25℃ to +125℃

REV: S5

DATE:2005.08.30

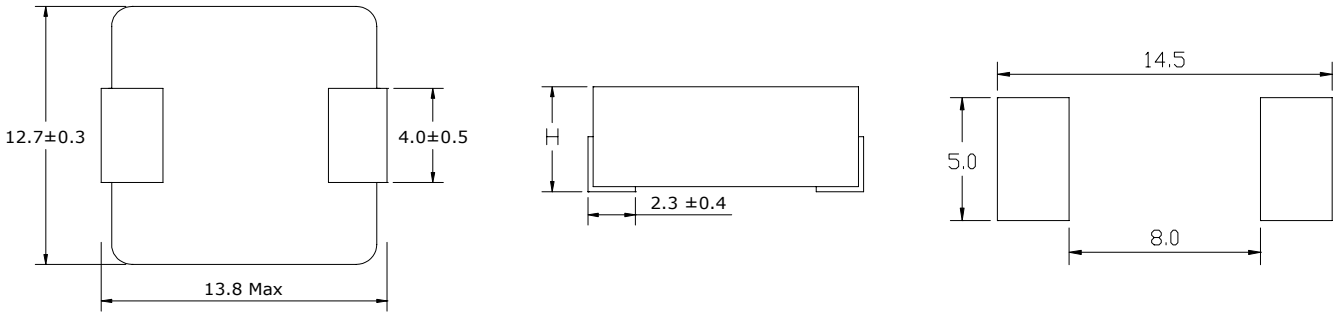
KARSON ELECTRONICS CO., LTD.

MANUFACTURER AND SUPPLIER OF IRON POWDER CORES.

PRODUCT: SMD Power Inductor

MODEL: KJ13xx series

PHYSICAL DIMENSION: [Unit: mm]



RECOMMENDED LAYOUT: [Unit: mm]

GENERAL SPECIFICATIONS:

P/N	L0 Inductance μH ±20% @0A	Height	DCR (mΩ)		Heat Rating Current	Saturation Current
		mm [Max]	[Typical]	[Max]	Idc (Amp DC) Typical	Isat (Amp DC) Typical
KJ1350-R47M	0.47	5	1.1	1.3	27	40
KJ1365-R47M		6.5	0.7	0.8	35	50
KJ1350-R56M	0.56	5	1.3	1.5	24.8	38
KJ1350-R68M	0.68	5	1.5	1.7	23	36
KJ1350-R82M	0.82	5	1.8	2.1	21	34
KJ1350-1R0M	1.0	5	2.0	2.3	20	32
KJ1370-1R0M		7	1.4	1.6	26	35
KJ1370-1R2M	1.2	7	1.7	2.1	23	32
KJ1350-1R5M	1.5	5	3.0	3.5	16.8	26
KJ1370-1R5M		7	2.0	2.4	21	30
KJ1370-2R2M	2.2	7	3.0	3.6	17	26
KJ1370-3R3M	3.3	7	4.0	4.8	15.6	22
KJ1370-4R7M	4.7	7	6.3	7.5	12.3	18

Test condition @ 100KHz, 0.25Vrms, 25°C ambient

Idc: DC current(A) that will cause an approximate ΔT of 40℃

Isat: DC current(A) that will cause Lo to drop approximately 20%

Operating Temperature Range: -25℃ to +125℃

REV: S8

DATE:2005.12.20

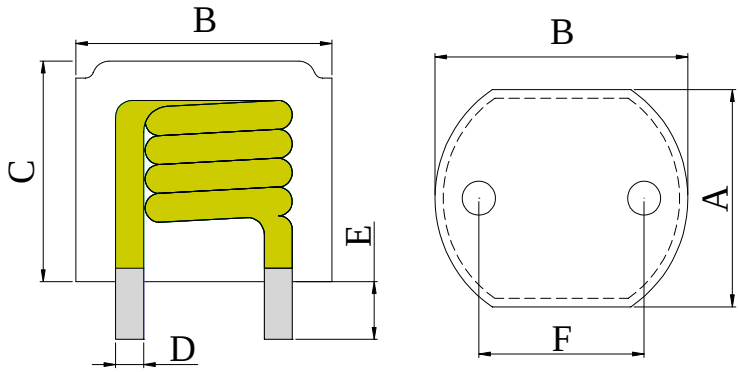
KARSON ELECTRONICS CO., LTD.

MANUFACTURER AND SUPPLIER OF IRON POWDER CORES.

PRODUCT: Power Inductor

MODEL: KQ10VC series

PHYSICAL DIMENSION: [Unit: mm]



A	10.2 ±0.5
B	12.3 ±0.5
C	by each P/N
D	by each P/N
E	3.4 ±0.5
F	8.0 ±0.5

GENERAL SPECIFICATIONS:

P/N	L0 Inductance μH ±20% @0A	C mm [Max]	D mm ± 0.25	DCR (mΩ) [Typical]	DCR (mΩ) [Max]	Heat Rating Current Idc (Amp) Typical	Saturation Current Isat (Amp) Typical
KQ10VC-R22M	0.22	7.5	1.4	0.50	0.6	36	56
KQ10VC-R33M	0.33	8.6	1.4	0.70	0.8	31	48
KQ10VC-R39M	0.39	8.6	1.4	0.70	0.8	31	43
KQ10VC-R47M	0.47	10.0	1.5	0.9	1.0	28	40
KQ10VC-R56M	0.56	10.0	1.5	0.9	1.0	28	38
KQ10VC-R68M	0.68	10.0	1.5	0.9	1.0	28	36
KQ10VC-R80M	0.8	10.0	1.4	1.25	1.45	24	34
KQ10VC-1R0M	1.0	10.0	1.2	1.75	2.0	20	32
KQ10VC-1R5M	1.5	10.0	1.0	3.0	3.5	16	30
KQ10VC-2R2M	2.2	10.0	1.0	4.3	5.0	13.6	24
KQ10VC-2R8M	2.8	10.0	0.9	5.6	6.4	12.3	20
KQ10VC-3R3M	3.3	10.0	0.8	6.8	7.7	11.2	16
KQ10VC-4R7M	4.7	10.0	0.8	8.8	10.0	10	15

Test condition @ 100KHz, 0.1Vrms, 25°C ambient

Idc: DC current(A) that will cause an approximate ΔT of 40℃

Isat: DC current(A) that will cause Lo to drop approximately 20%

Operating Temperature Range: -25℃ to +125℃

REV: S8

DATE:2005.12.20

KARSON ELECTRONICS CO., LTD.

MANUFACTURER AND SUPPLIER OF IRON POWDER CORES.

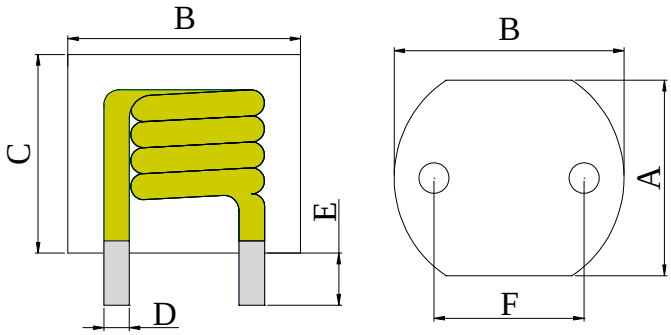
PRODUCT: Power Inductor **[Comply with RoHS]**

MODEL: KQ13VC series

FEATURES:

· No air-space, Magnetic powder is full filled inside.
· Low DCR, Lower Loss, Low profile package with Large Current Design.
· Magnetic shielded construction for high density board assembly.
· Good DC current characteristics in high frequency and high temperature.
· Flexibility for Customer Specification Design

PHYSICAL DIMENSION: [Unit: mm]



A	10.2 ±0.5
B	12.3 ±0.5
C	by each P/N
D	by each P/N
E	3.4 ±0.5
F	8.0 ±0.5

GENERAL SPECIFICATIONS:

P/N	L0 Inductance μH ±20% @0A	Height [Max]	Φ ± 0.3	DCR (mΩ) [Typical]	DCR (mΩ) [Max]	Heat Rating Current Idc (Amp) Typical	Saturation Current Isat (Amp) Typical
KQ13VC-R39M	0.39	9.5	1.7	0.60	0.70	37	54
KQ13VC-R47M	0.47	9.5	1.7	0.65	0.75	36	50
KQ13VC-R56M	0.56	9.5	1.7	0.65	0.75	36	50
KQ13VC-R68M	0.68	11	1.7	0.78	0.90	34	48
KQ13VC-R80M	0.8	11	1.7	0.86	1.00	32	45
KQ13VC-R90M	0.9	11	1.7	0.86	1.00	32	45
KQ13VC-1R0M	1.0	10	1.5	1.15	1.32	27	40
KQ13VC-1R2M	1.2	10	1.5	1.20	1.36	26	40

Test condition @ 100KHz, 0.1Vrms, 25°C ambient

Idc: DC current(A) that will cause an approximate ΔT of 40℃

Isat: DC current(A) that will cause Lo to drop approximately 20%

Operating Temperature Range: -25℃ to +125℃