



# Karson Electronics Co., Ltd

## ◆ Feature

1. Large energy storage capacity
2. Excellent DC bias characteristic
3. No magnetic flux leakage

## ◆ Application

1. Power factor correction(PFC) circuits
2. AC Reactor for inverter
3. Flyback transformer
4. Multiple circuit choke coil
5. Power inductor for large current
6. Buck/Boost inductor for inverter



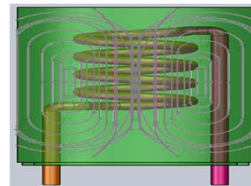
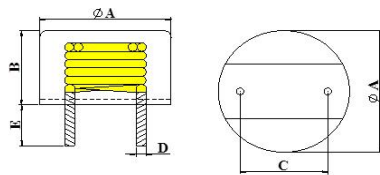
## ◆ Configuration

**KQ 55 V C - 511 M**

(1) (2) (3) (4) (5) (6)

- (1) Type Code(KQ for THD type)
- (2) Series Code(Typical dimension, 55 is about 55mm diameter)
- (3) Pin location ( parallel for "V")
- (4) Material code
- (5) Inductance:  $511 = 51 \times (10^1) = 510 \mu\text{H}$
- (6) Inductance tolerance: M=  $\pm 20\%$ , L=  $\pm 15\%$ , K=  $\pm 10\%$

## ◆ Dimension & Electrical Specification



## ◆ KQ35 Series

P/N	L0	A	B	C	D	E	DCR (mΩ)		Heat Rating Current (Amp)	Saturation Current (Amp)		
	Inductance						[Typical]	[ Max ]		ΔT=85℃	L(60%)	L(50%)
	μH ±20%								mm			
	@0A	± 1.0	MAX	± 1.0	± 0.1	± 0.4						
KQ35VC-151M	150	35.0	25.0	22.0	1.4	4.5	33.5	40.0	13.0	32.0	40.0	48.0

## ◆ KQ45 Series

P/N	L0	A	B	C	D	E	DCR (mΩ)		Heat Rating Current (Amp)	Saturation Current (Amp)		
	Inductance						[Typical]	[ Max ]		ΔT=85℃	L(60%)	L(50%)
	μH ±20%								mm			
	@0A	± 2.0	MAX	± 1.0	± 0.1	± 0.4						
KQ45VC-231M	230	45.0	40.0	27.0	1.7	5.0	27.0	33.0	20.0	35.0	44.0	53.0
KQ45VC-301M	300	45.0	40.0	25.5	1.4	5.0	42.0	50.0	15.5	31.0	37.5	45.0

◆ KQ50 Series

P/N	L0	A	B	C	D	E	DCR (mΩ)		Heat Rating Current (Amp)	Saturation Current (Amp)		
	Inductance						[Typical]	[ Max ]		ΔT=85℃	L(60%)	L(50%)
	μH ±20%											
	@0A											
KQ50VC-451M	450	50.0	40.0	32.0	1.7	5.0	42.0	50.0	16.0	33.0	42.0	51.0

◆ KQ55 Series

P/N	L0	A	B	C	D	E	DCR (mΩ)		Heat Rating Current (Amp)	Saturation Current (Amp)		
	Inductance						[Typical]	[ Max ]		ΔT=85℃	L(60%)	L(50%)
	μH ±20%											
	@0A											
KQ55VC-251M	250	55.0	45.0	32.0	2.0	5.0	25.0	30.0	23.5	50.0	62.5	75.0
KQ55VC-351M	350	55.0	50.0	32.0	1.8	5.0	35.0	42.0	20.0	37.5	46.5	56.0

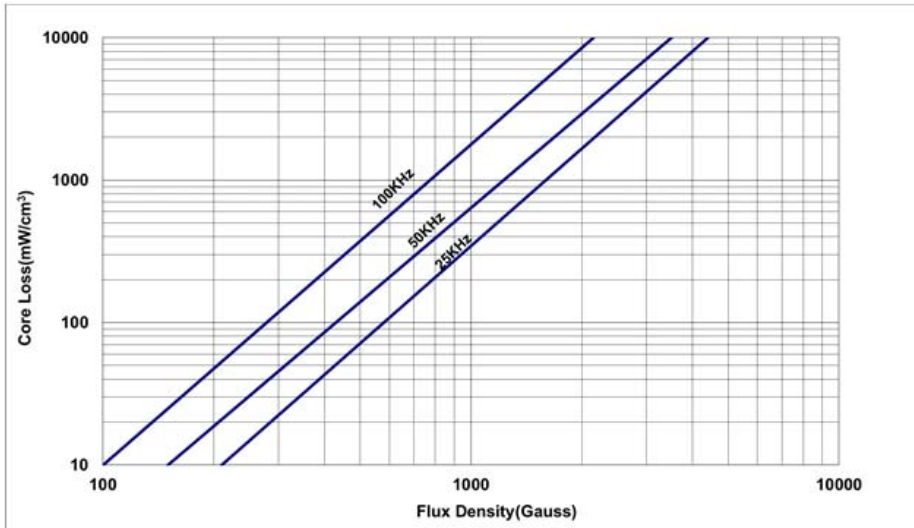
◆ KQ63 Series

P/N	L0	A	B	C	D	E	DCR (mΩ)		Heat Rating Current (Amp)	Saturation Current (Amp)		
	Inductance						[Typical]	[ Max ]		ΔT=85℃	L(60%)	L(50%)
	μH ±20%											
	@0A											
KQ63VC-121M	120	63.0	40.0	35.5	2.6	5.0	8.5	10.5	46.0	80.0	100.0	120.0
KQ63VC-251M	250	63.0	50.0	35.5	2.6	5.0	12.5	15.0	38.0	64.5	80.5	97.0
KQ63VC-301M	300	63.0	50.0	35.5	2.4	5.0	18.5	22.5	30.5	60.5	75.5	91.0
KQ63VC-451M	450	63.0	50.0	35.5	2.2	5.0	28.0	33.5	25.0	43.0	54.0	65.0
KQ63VC-511M	510	63.0	50.0	35.5	2.2	5.0	31.0	37.5	23.5	39.0	48.5	58.5
KQ63VC-751M	750	63.0	50.0	35.5	1.7	5.0	55.0	66.0	17.0	20.0	25.0	30.0

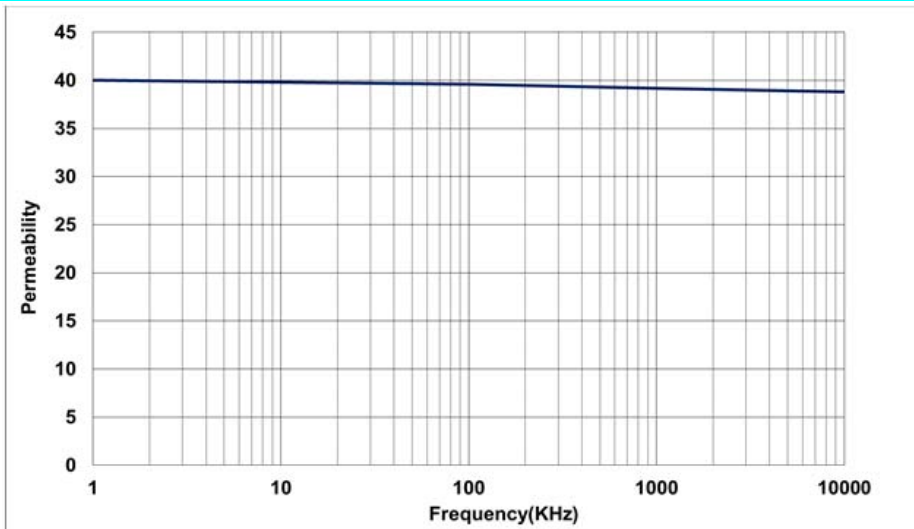
◆ KQ75 Series

P/N	L0	A	B	C	D	E	DCR (mΩ)		Heat Rating Current (Amp)	Saturation Current (Amp)		
	Inductance						[Typical]	[ Max ]		ΔT=85℃	L(60%)	L(50%)
	μH ±20%											
	@0A											
KQ75VC-751M	750	75.0	60.0	44.0	2.6	5.0	26.5	31.5	27.5	44.0	55.0	65.0
KQ75VC-781M	780	75.0	50.0	43.0	2.4	5.0	32.5	39.0	25.5	33.0	41.5	50.0

◆ Core Loss



◆ Permeability V.S. Frequency



◆ Permeability V.S. H-DC

