

# HK Film Capacitor Ltd

## 8. High Voltage Snubber Capacitors – IGBT SMKP2-Hx series (x is referring to “I”, “L” and “N”)

### Applications :

For protection against voltage and current transients in IGBT modules and applications where high dv/dt is encountered

### Construction :

- Low inductance construction
- Flame retardant plastic case and Epoxy Resin UL94-V0
- High Current carrying capacity Tinned Terminals for direct mounting the capacitor to IGBT module
- other Terminals also available

### Electrical Characteristics :

Capacitance : 0.01uF – 0.047uF at 1kHz +23C

Capacitance Tolerance : +/-10% (K)

Rated Voltage : Ur

Vac	1600	2100
Vdc	4500	5600

**Test Voltage** : between Terminals :1.5xUr Vdc 60s +23C  
Terminals to Case: 3kVac 60s at +23

**Ripple RMS Current** : up to 10A at 70C

**Rated Temperature** : +70C / +85C

**Service Life** : 30,000 hours at rated Vac 70C

60,000 hours at rated Vdc 70C

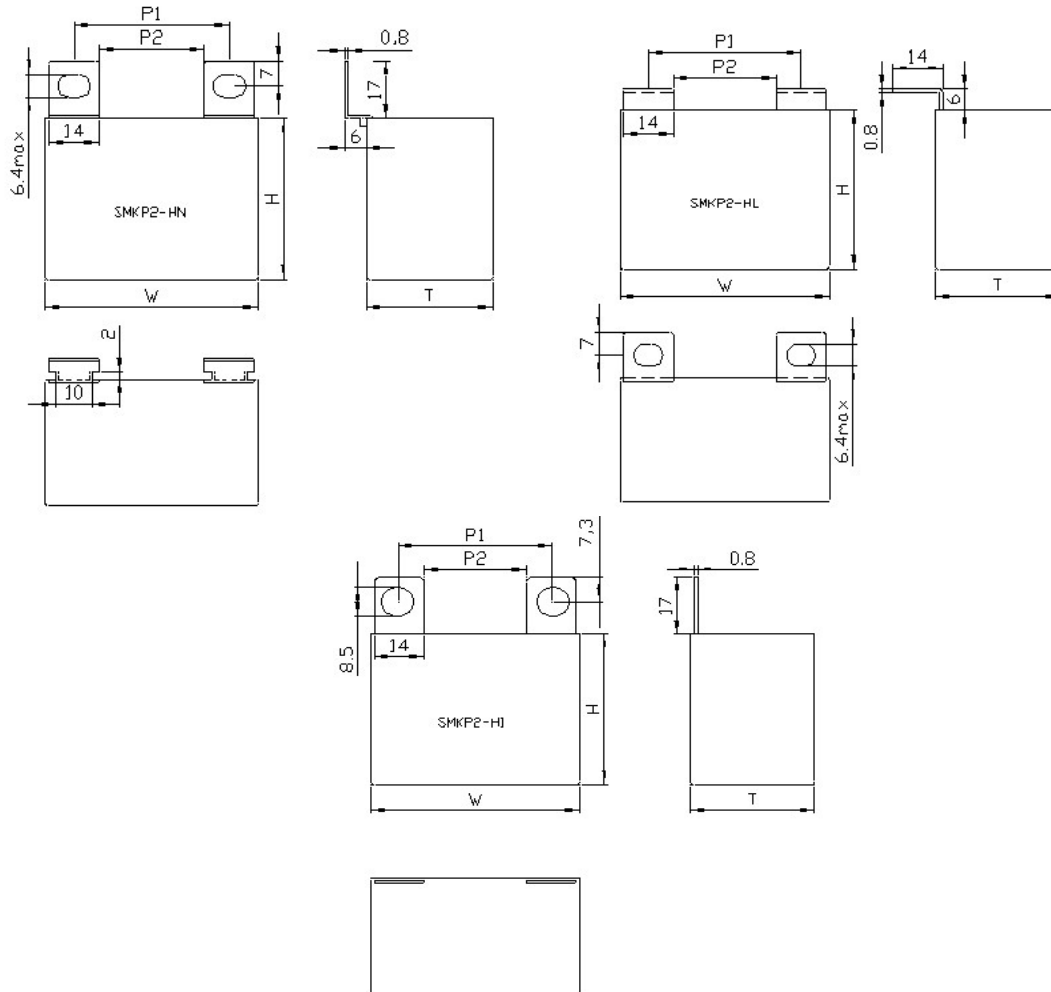
**Accelerated Life** : 1.25 x rated Vac at 85C for 2,000 hours

**Equivalent Series Resistance ESR** : see item table

Support Ultra Low ESR requirement

**Equivalent Series Inductance ESL** : < 22nH

**Insulation Resistance** : 250Vdc +23C >= 50,000Mohm



**Specifications and Size :**

**SMKP2-Hx 1600Vac / 4500Vdc**

(x is referring the “L” and “N” configuration)

P/N :	Cn uF	Dimension mm			dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp at 70C	Max. Amp at 85C	Pitch, P1
		W	H	T							
SMKP2-Hx223K1600A	0.022	57.5	45	35	8840	194	20	15	5	4	28 ~ 40
SMKP2-Hx253K1600A	0.025	57.5	45	35	8840	221	20	13.5	5	4	28 ~ 40
SMKP2-Hx333K1600A	0.033	57.5	45	35	8840	291	20	12	6	5	28 ~ 40
SMKP2-Hx393K1600A	0.039	57.5	45	35	8840	344	20	11	7	6	28 ~ 40
SMKP2-Hx413K1600A	0.041	57.5	45	35	8840	362	20	9.5	9	8	28 ~ 40
SMKP2-Hx453K1600A	0.045	57.5	45	35	8840	397	20	8	10	9	28 ~ 40
SMKP2-Hx473K1600A	0.047	57.5	45	35	8840	415	20	8	10	9	28 ~ 40

**SMKP2-HI 2100Vac / 5600Vdc**

P/N :	Cn UF	Dimension mm			dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp at 70C	Max. Amp at 85C	Pitch, P1
		W	H	T							
SMKP2-HI103K2100A	0.01	59	45	35	11250	112	12	15	5	4	35 ~ 44
SMKP2-HI123K2100A	0.012	59	45	35	11250	135	12	12	6	5	35 ~ 44
SMKP2-HI153K2100A	0.015	59	45	35	11250	168	12	12	6	5	35 ~ 44
SMKP2-HI183K2100A	0.018	59	45	35	11250	202	12	10	8	7	35 ~ 44
SMKP2-HI203K2100A	0.02	59	45	35	11250	225	12	9	10	9	35 ~ 44
SMKP2-HI223K2100A	0.022	59	45	35	11250	207	12	9	10	9	35 ~ 44

For other Capacitance, Voltage, dv/dt and Peak Current <sup>1</sup>not listed, please contact us for a suggestion.