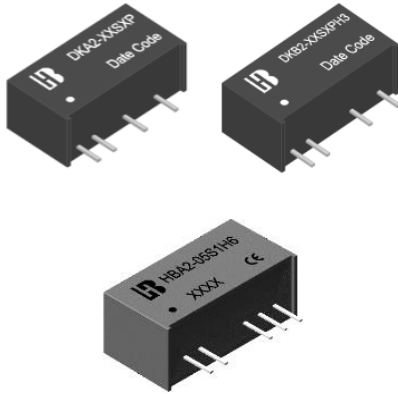


# DC-DC Converters (1.5kVdc, 3kV and 6kV Isolation) 2W SIP

DKA/DKB/HBA2- series



- Ⓢ Input Voltage Range: 5V, 12V, 15V and 24V (+/-10%)
- Ⓢ Output Voltage Range: 5V to 24V, Single and Dual (+/-Vout)
- Ⓢ Power Level: 2W
- Ⓢ Isolation: 1.5kVdc, 3kVdc and 6kVdc
- Ⓢ Efficiency : up to 85% , no heatsinks required
- Ⓢ Operating Temperature Range: -40°C to +105°C
- Ⓢ Additional Features:
  - Ⓢ IEC/EN 62368-1 Approved
  - Ⓢ Low Ripple and Noise,
  - Ⓢ Thermal Shut-Down

Electrical Specification @ 25°C (For DKA 1.5K Vdc Isolation Op: -40°C to +105°C)							
Model Number	Input Voltage Range(V)	Output Voltage (V)	Output Current (mA)	Input Current (mA) Typ.		Eff .(%) Typ.	Capacitive Load, max. (uF)
			Full Load	No Load	Full Load		
DKA2-05S1P	4.5-5.5 Nominal:5	5	400	35	500	80	47
DKA2-05S2P		12	166	35	475	84	22
DKA2-05D2P		±12	±83	35	475	84	10/10
DKA2-05D3P		±15	±66	35	475	84	4.7/4.7
DKA2-12S2P	10.8-13.2 Nominal:12	12	166	15	198	84	22
DKA2-12D2P		±12	±83	15	198	84	10/10
DKA2-24D3P	21.6-26.4 Nominal:24	±15	±66	8	99	84	10/10

Electrical Specification @ 25°C (For DKB 3K Vdc Isolation Op: -40°C to +105°C)							
Model Number	Input Voltage Range(V)	Output Voltage(V)	Output Current (mA)	Input Current (mA) Typ.		Eff .(%) Typ.	Capacitive Load, max. (uF)
			Full. Load	No Load	Full Load		
DKB2-05S3H3	4.5-5.5 Nominal:5	15	133	35	475	84	22
DKB2-12S1H3	10.8-13.2 Nominal:12	5	400	15	208	80	47
DKB2-24S5H3	21.6-26.4 Nominal:24	24	83	8	99	84	10
DKB2-05D3PH3	4.5-5.5 Nominal:5	±15	±66	35	475	84	10/10
DKB2-12D2PH3	10.8-13.2 Nominal:12	±12	±83	15	198	84	10/10



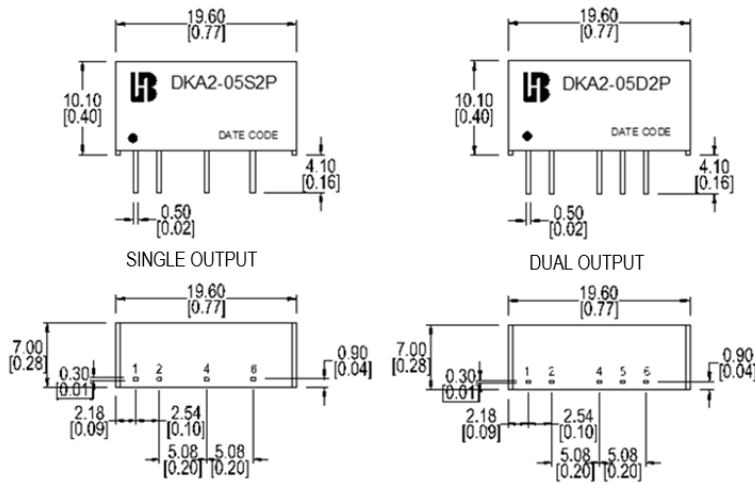
Electrical Specification @ 25°C (For HBA2 6K Vdc Isolation Op: -40°C to +105°C)							
Model Number	Input Voltage Range(V)	Output Voltage (V)	Output Current (mA)	Input Current (mA)		Eff. (%)	Capacitive Load, max. (uF)
			Full Load	No Load	Full Load		
HBA2-12S1H6	10.8 ~ 13.2 Nominal: 12	5	400	30	208	80	1200
HBA2-12D2H6		±12	±85	30	202	84	±330
HBA2-15SAH6	13.5 ~ 16.5 Nominal: 15	9	222	25	160	83	1200
HBA2-15S3H6		15	132	25	155	85	680
HBA2-24S3H6	21.6 ~ 26.4 Nominal: 24	15	132	20	104	79	680
HBA2-24D2H6		±12	±85	20	106	80	±330
HBA2-24D3H6		±15	±66	20	103	80	±330
HBA2-12Y1H6	10.8 ~ 13.2 Nominal: 12	+15/-5	+80/-40	30	143	82	+220/-220
HBA2-12Y2H6		+15/-8	+100/-80	30	213	84	+220/-220
HBA2-12Y3H6		+20/-5	+50/-200 ±80	30	200	83	+220/-220
HBA2-24Y1H6	21.6 ~ 26.4 Nominal: 24	+15/-5	+80/-40	10	71	82	+220/-220
HBA2-24Y3H6		+20/-5	+50/-200 ±80	20	99	85	+220/-220

## Process and Materials

- Storage Temperature: -55°C to +125°C
- Compliance to J-STD:
  - J-STD-002: Solderability of Dipping at 255~260°C
  - J-STD-020: Moisture Sensitive Level 1
- All parts are packaged in tubes - see pages 4 and 5 for details
- For full electrical characteristics, curves and applications, please refer to the detailed specification sheets available on request
- Lead Frame: Cooper Alloy
  - Underplated: Half Hard Ductile Nickel 40-118" (1.0 -3.0um)
  - Over plated: 100% Tin electro-deposited per 240~400u"Min(6~10um)
  - Finish: Matte finish 100% Tin solder

Mechanical

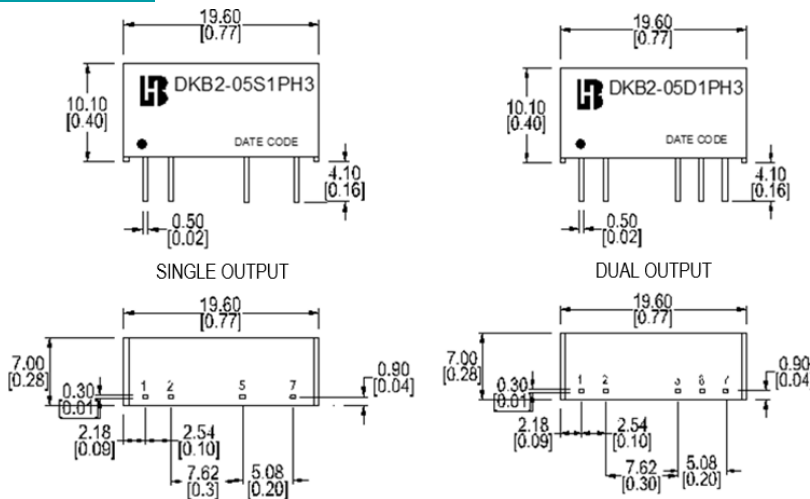
DKA2-P



DKA2-xxXxP		
PIN	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
4	-Vout	-Vout
5	No Pin	Common
6	+Vout	+Vout

Unit: mm (inch for reference only)  
Pin Section tolerances +/-0.1  
General tolerances +/-0.5

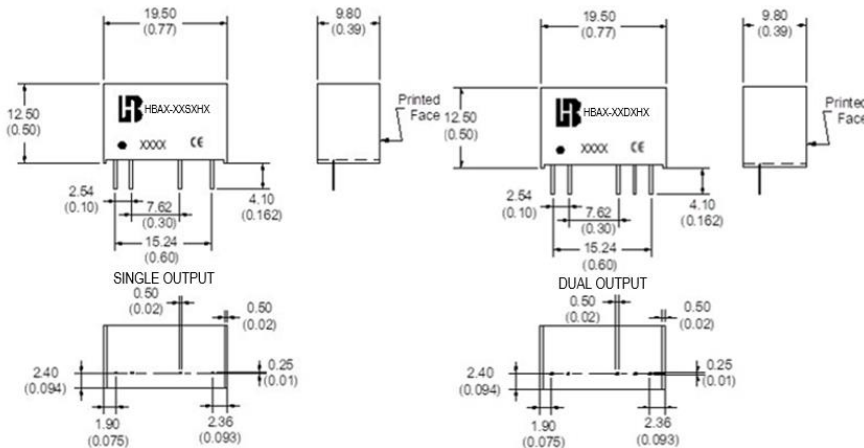
DKB2H3/DKB2PH3



DKB2-xxXxH3/PH3		
PIN	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
6	No Pin	Common
7	+Vout	+Vout

Unit: mm (inch for reference only)  
Pin Section tolerances +/-0.1  
General tolerances +/-0.5

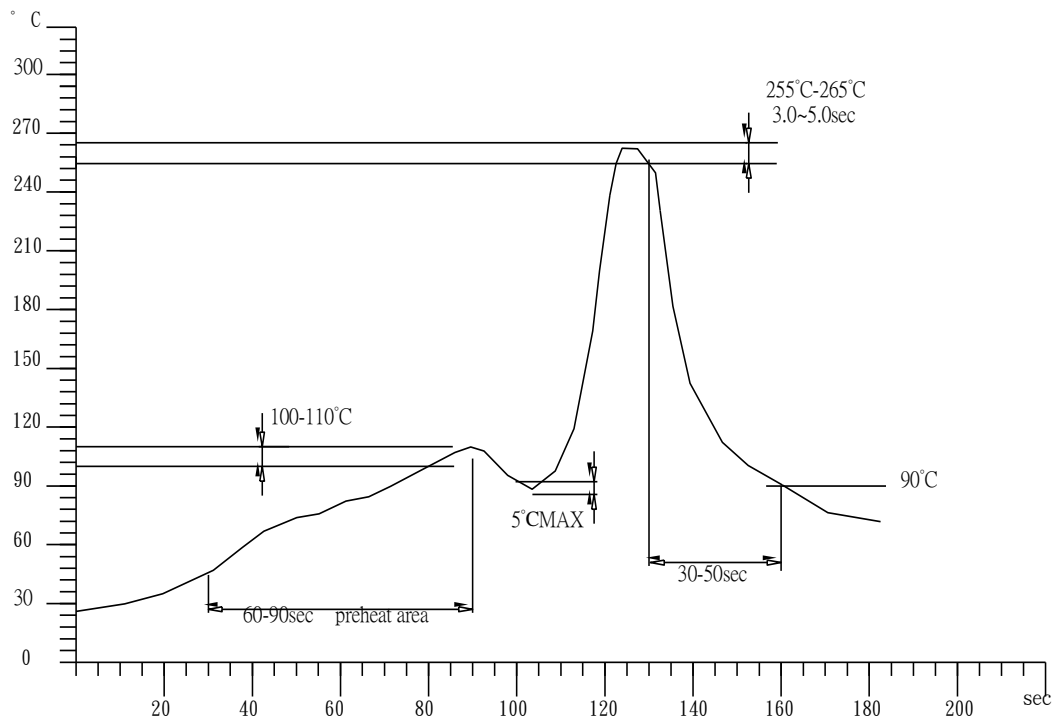
HBA2



HBA2-xxXxHX		
PIN	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
6	No Pin	Common
7	+Vout	+Vout

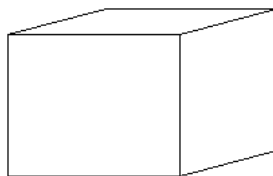
Unit: mm (inch for reference only)  
Pin Section tolerances +/-0.1  
General tolerances +/-0.5

### Wave Soldering Temperature Curve

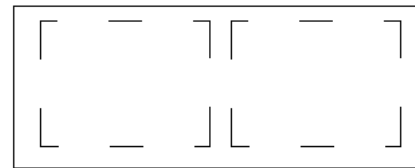


### Carton Package

#### DKA2P/ DKB2H3/DKB2PH3



INNER CARTON:567\*135\*125



EXPORT CARTON:598\*287\*150

TUBE=25PCS

INNER CARTON=50 TUBE=50\*25=1250PCS

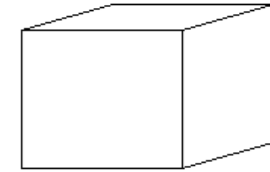
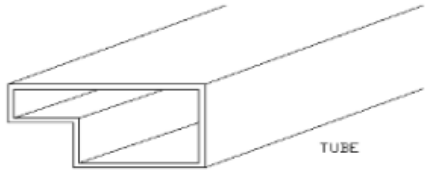
EXPORT CARTON=2 INNER CARTON=2\*1250=2500PCS

# DC-DC Converters (1.5kVdc, 3kV and 6kV Isolation) 2W SIP

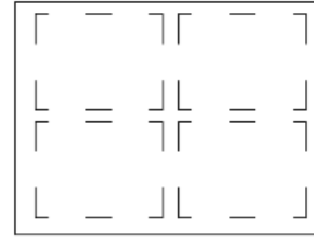
DKA/DKB/HBA2- series

## Carton Package

### HBA2



INNER CARTON:388\*158.5\*115



EXPORT CARTON:405\*334\*263

TUBE=15PCS

INNER CARTON=36 TUBE=36\*15=540PCS

EXPORT CARTON=4 INNER CARTON=4\*540=2160PCS

### For More Information:

Americas - [prodinfo\\_network\\_americas@yageo.com](mailto:prodinfo_network_americas@yageo.com) | Europe - [prodinfo\\_network\\_emea@yageo.com](mailto:prodinfo_network_emea@yageo.com) | Asia - [prodinfo\\_network\\_asia@yageo.com](mailto:prodinfo_network_asia@yageo.com)

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