

SERIES C/SC
SURFACE MOUNT and PLUG-IN

Hi Reliability, Ultra-Miniature
Isolated DC-DC Converters Up to 4 Watts

This series of unregulated DC-DC converters are produced in an miniaturized encapsulated package. 188 different models are available. The units feature single and isolated dual outputs. They will operate over the temperature range of -25° C to +70° C. No heat sink is required.

Low Profile
0.3" Height
Up to 4 Watts

No Heat Sink or
Electrical Derating
Required

OPTIONS AVAILABLE

-
- Per Mil. Std. 883
- Expanded operating temp (-55° C to +85° C)
- Stabilization Bake (125° C ambient)
- Temperature Cycle (-55° C to +125° C)
- Hi Temp, full power burn in (100% power, 125° C case temp)

FEATURES

-
- Up to 4 watts output at 70° C ambient
- Encapsulated semiconductors, conservatively rated for maximum reliability
- Ultra-Miniature-size (0.3" Height)
- 6 input voltages 5, 12, 15, 24, 28 and 48V DC
- 100 megohm @ 500V DC
- Single and dual isolated output
- No heat sink required

TYPICAL CHARACTERISTICS:

- **Test conditions:** 25° C ambient and input voltage at nominal value unless otherwise specified.
LINE REGULATION: OUTPUT IS DIRECTLY PROPORTIONAL TO THE INPUT.
Input voltage range:
 - - 5V models: 4 to 6.5V DC
 - 12V models: 9 to 15V DC
 - 15V models: 12 to 18V DC
 - 24V models: 17 to 28V DC
 - 28V models: 21 to 31V DC
 - 48V models: 25 to 50V DC
- **Output voltage tolerance at full load:**
 - - 5V models ± 0.25V
 - 9V models ± 0.3V
 - 12V & 15V models ± 0.4V
 - 24V & 28V models ± 0.5V
 - 48V models ± 0.7V
- **Converter frequency:** 20 to 40 KHz
Output temperature coefficient: 0.02%/°C
Operating temperature: -25° C to +70° C ambient. No heat sink is required.
Storage temperature: -55° C to +125° C
Isolation: 100 megohms min. @ 500V DC
Short circuit protection: Temporary

SERIES C/SC - SINGLE OUTPUT											
PICO Plug-In Part Number	PICO Surface Mount Part Number	Input Volt. (V DC)	Output Volt. (V DC)	Max. Load Current (mA)	Max. Output Power (watts)	Eff. @ Full Load Typical (%)	Input Current Full Load Typical (mA)	Output Volt. Ripple @ Full Load* (Vp-p max)	No Load Current Typical (mA)	Full Load Output Voltage Tolerance (V DC)	Price (US \$)
5C3.3S	5SC3.3S	5	3.3	758	2.5	60	833	0.20	90	±0.2	71.39
5C5S	5SC5S	5	5	500	2.5	68	735	0.20	90	±0.25	71.39
5C5.2S	5SC5.2S	5	5.2	481	2.5	68	735	0.20	90	±0.25	71.39
5C9S	5SC9S	5	9	333	3.0	72	833	0.20	100	±0.3	71.39
5C12S	5SC12S	5	12	250	3.0	75	800	0.20	100	±0.4	71.39
5C15S	5SC15S	5	15	200	3.0	77	779	0.15	100	±0.4	71.39
5C24S	5SC24S	5	24	125	3.0	76	789	0.15	120	±0.5	71.39
5C28S	5SC28S	5	28	107	3.0	76	789	0.15	120	±0.5	71.39
5C48S	5SC48S	5	48	63	3.0	76	789	0.15	120	±0.7	71.39

12C3.3S	12SC3.3S	12	3.3	758	2.5	60	347	0.20	45	±0.2	71.39
12C5S	12SC5S	12	5	500	2.5	67	311	0.20	45	±0.25	71.39
12C5.2S	12SC5.2S	12	5.2	481	2.5	67	311	0.20	45	±0.25	71.39
12C9S	12SC9S	12	9	333	3.0	75	333	0.20	45	±0.3	71.39
12C12S	12SC12S	12	12	290	3.5	77	379	0.20	40	±0.4	71.39
12C15S	12SC15S	12	15	266	4.0	84	396	0.15	40	±0.4	71.39
12C24S	12SC24S	12	24	166	4.0	81	411	0.15	45	±0.5	71.39
12C28S	12SC28S	12	28	143	4.0	82	407	0.15	45	±0.5	71.39
12C48S	12SC48S	12	48	83	4.0	81	412	0.15	45	±0.7	71.39
15C3.3S	15SC3.3S	15	3.3	758	2.5	60	278	0.20	38	±0.2	71.39
15C5S	15SC5S	15	5	500	2.5	67	249	0.20	38	±0.25	71.39
15C5.2S	15SC5.2S	15	5.2	481	2.5	67	249	0.20	38	±0.25	71.39
15C9S	15SC9S	15	9	333	3.0	75	267	0.20	38	±0.3	71.39
15C12S	15SC12S	15	12	290	3.5	77	303	0.20	35	±0.4	71.39
15C15S	15SC15S	15	15	266	4.0	84	317	0.15	35	±0.4	71.39
15C24S	15SC24S	15	24	166	4.0	81	329	0.15	38	±0.5	71.39
15C28S	15SC28S	15	28	143	4.0	82	325	0.15	38	±0.5	71.39
15C48S	15SC48S	15	48	83	4.0	81	329	0.15	38	±0.7	71.39
24C3.3S	24SC3.3S	24	3.3	758	2.5	60	174	0.20	25	±0.20	71.39
24C5S	24SC5S	24	5	500	2.5	67	155	0.20	25	±0.25	71.39
24C5.2S	24SC5.2S	24	5.2	481	2.5	67	155	0.20	25	±0.25	71.39
24C9S	24SC9S	24	9	333	3.0	73	171	0.20	25	±0.3	71.39
24C12S	24SC12S	24	12	290	3.5	75	194	0.20	25	±0.4	71.39
24C15S	24SC15S	24	15	235	3.5	79	184	0.20	25	±0.4	71.39
24C24S	24SC24S	24	24	166	4.0	83	200	0.20	25	±0.5	71.39
24C28S	24SC28S	24	28	143	4.0	83	201	0.20	25	±0.5	71.39
24C48S	24SC48S	24	48	83	4.0	83	201	0.20	25	±0.7	71.39
28C3.3S	28SC3.3S	28	3.3	758	2.5	60	149	0.20	25	±0.20	71.39
28C5S	28SC5S	28	5	500	2.5	67	133	0.20	25	±0.25	71.39
28C5.2S	28SC5.2S	28	5.2	481	2.5	67	133	0.20	25	±0.25	71.39
28C9S	28SC9S	28	9	333	3.0	73	147	0.20	25	±0.3	71.39
28C12S	28SC12S	28	12	290	3.5	75	167	0.20	25	±0.4	71.39
28C15S	28SC15S	28	15	235	3.5	78	160	0.20	25	±0.4	71.39
28C24S	28SC24S	28	24	166	4.0	82	174	0.20	25	±0.5	71.39
28C28S	28SC28S	28	28	143	4.0	83	172	0.20	25	±0.5	71.39
28C48S	28SC48S	28	48	83	4.0	83	172	0.20	25	±0.7	71.39
48C3.3S	48SC3.3S	48	3.3	758	2.5	65	80	0.25	3	±0.20	76.62
48C5S	48SC5S	48	5	500	2.5	75	69	0.25	3	±0.25	76.62
48C5.2S	48SC5.2S	48	5.2	481	2.5	75	69	0.25	3	±0.25	76.62
48C9S	48SC9S	48	9	333	3.0	76	82	0.25	3	±0.3	76.62
48C12S	48SC12S	48	12	290	3.5	81	90	0.25	3	±0.4	76.62
48C15S	48SC15S	48	15	235	3.5	81	90	0.25	3	±0.4	76.62
48C24S	48SC24S	48	24	166	4.0	85	98	0.25	3	±0.5	76.62
48C28S	48SC28S	48	28	143	4.0	83	100	0.25	3	±0.5	76.62
* The ripple is measured with a 22µF, 75 volt high quality tantalum capacitor which is required across the output. Ordering Instructions: No minimum. Net 30 days F.O.B. Pelham, New York											

SERIES C/SC - DUAL OUTPUT											
PICO Plug-In Part Number	PICO Surface Mount Part Number	Input Volt. (V DC)	Output Volt. (V DC)	Max. Load Current per Output (mA)	Max. Output Power per Output (watts)	Eff. @ Full Load Typical (%)	Input Current Full Load Typical (mA)	Output Volt. Ripple @ Full Load* (Vp-p max)	No Load Current Typical (mA)	Full Load Output Voltage Tolerance (V DC)	Price (US \$)
5C5D	5SC5D	5	5	250	1.25	71	704	0.20	90	±0.25	81.32
5C9D	5SC9D	5	9	166	1.5	72	833	0.20	100	±0.3	81.32
5C12D	5SC12D	5	12	125	1.5	75	800	0.20	100	±0.4	81.32
5C15D	5SC15D	5	15	100	1.5	77	779	0.15	110	±0.4	81.32
5C24D	5SC24D	5	24	62	1.5	78	769	0.15	120	±0.5	81.32
5C28D	5SC28D	5	28	53	1.5	76	789	0.15	120	±0.5	81.32
5C48D	5SC48D	5	48	31	1.5	76	789	0.15	120	±0.7	81.32

* The ripple is measured with a 22μF, 75 volt high quality tantalum capacitor which is required across each output.
Ordering Instructions: No minimum. Net 30 days F.O.B. Pelham, New York

C Dual

Bottom View

Larger Size Drawing [4]

Typical Weight: 14.5 Grams

C/SC SERIES TYPICAL CONNECTION

C ≈22μF, 75 volts high quality tantalum capacitor.

Larger Size Schematic [5]

SC Dual

BOTTOM VIEW

Typical Weight: 14.5 Grams

NOTE: ALL DIMENSIONS ARE IN INCHES

Larger Size Drawing [6]

Pin no.	Dual
1	-INP
2	N/C
3	N/C
4	+INP
5	+OUT1
6	-OUT1
7	+OUT2
8	-OUT2

SINGLE & DUAL 48V - 5V

Larger Size Graph [7]

SINGLE & DUAL 24V - 24V

Larger Size Graph [8]

SINGLE & DUAL 5V - 5V

Larger Size Graph [9]

RECOMMENDED LAND PATTERN DIMENSIONS

SC SERIES

For immediate engineering assistance or to place an order:
Call Toll Free: 800-431-1064

PICO Electronics, Inc.

143 Sparks Ave. Pelham, NY 10803
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