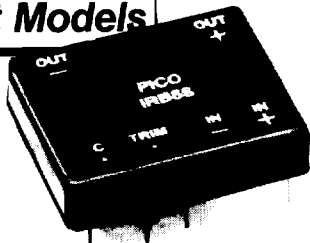


SERIES IR

Isolated Regulated up to 10 Watt DC-DC Converters

Wide Input Range/ up to 3.33:1 Fully Regulated All Units Shielded

New 100 VDC Output Models



NOW 2 Volts and 3.3 Volts DC OUTPUT AVAILABLE

FEATURES:

- Voltage regulation over input of

LOW	HI
IRE 5V 15V	
IRF 8V 24V	
IRA 18V 36V	
IRB 36V 60V	
IRC 18V 60V	
- Encapsulated semiconductors, conservatively rated for maximum reliability.
- Load regulation (see table for typical variation at different loads)
- Line regulation = Typical values

5-15 V DC = ± 1.5%
8-24 V DC = ± 1.5%
18-36 V DC = ± 1.0%
36-60 V DC = ± 1.0%
18-60 V DC = ± 1.5%
- High efficiency—up to 84%
- Will operate over a temperature range of -25°C to +70°C with no heat sink or electrical derating
- 6 sided shielding
- Isolation—100 megohms at 500 volts DC
- External output trimming pin standard, +5%
- Single and dual isolated outputs.
- Each unit is supplied with an external control pin. This "C" pin, when connected to the negative (-) input, will disable the unit, allowing for remote shutdown.

OPTIONS AVAILABLE

- 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)

Low Profile Less Than 0.5" Height

Delivery—stock to one week

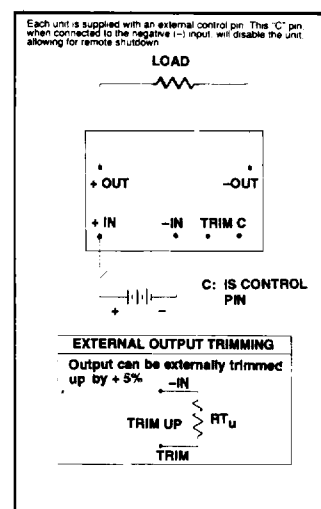
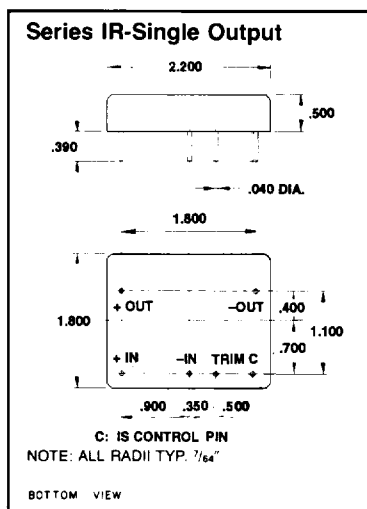
SERIES IR - SINGLE OUTPUT

PICO PART NUMBER	INPUT VOLTAGE RANGE	OUTPUT VOLTAGE (V DC)	MAX. LOAD CURRENT (mA)	MAX. OUTPUT POWER (watts)	EFF. @ FULL LOAD TYPICAL (%)*	INPUT CURRENT FULL LOAD TYPICAL (mA)*	OUT VOLT RIPPLE @ FULL LD. 1-1 MHz BW mv p-p	OUT VOLT TOLERANCE (±%)*	VLD. REG. 25%-100% LOAD‡ (±%)*	LINE REGULATION (±%)*	PRICE 1-24
IRE2S	5-15	2	2000	4	68	588	250	1.5	5	5.5	128.40
IRE3.3S	5-15	3.3	1515	5	76	658	250	1	3.5	5	128.40
IRE5S	5-15	5	1200	8	80	750	176	0.75	2.00	2.00	128.40
IRE9S	5-15	9	889	8	80	1000	150	0.50	1.50	1.00	128.40
IRE12S	5-15	12	867	8	78	1025	150	0.50	1.50	1.00	128.40
IRE15S	5-15	15	533	8	78	1025	150	0.50	1.50	1.00	128.40
IRE24S	5-15	24	333	8	82	975	150	0.50	0.75	1.00	128.40
IRE28S	5-15	28	286	8	83	965	200	0.50	0.50	0.50	128.40
IRE48S	5-15	48	167	8	83	905	250	0.50	0.50	0.50	128.40
IRE100S	5-15	100	60	8	80	760	300	0.50	0.50	0.75	180.60
IRF2S	8-24	2	2500	5	70	446	250	1.5	4	4	128.40
IRF3.3S	8-24	3.3	2424	8	77	650	200	1	2.5	2.5	128.40
IRF5S	8-24	5	2000	10	80	780	200	0.75	1.50	1.75	128.40
IRF9S	8-24	9	1111	10	81	770	150	0.50	0.75	1.25	128.40
IRF12S	8-24	12	833	10	78	800	150	0.50	0.75	0.75	128.40
IRF15S	8-24	15	687	10	78	800	150	0.50	0.75	0.75	128.40
IRF24S	8-24	24	417	10	83	755	150	0.50	0.75	0.75	128.40
IRF28S	8-24	28	357	10	83	755	200	0.50	0.50	0.50	128.40
IRF48S	8-24	48	208	10	84	745	250	0.50	0.50	0.50	128.40
IRF100	8-24	100	100	10	80	780	300	0.50	0.50	0.75	180.60
IRA2S	18-36	2	3000	6	71	313	200	1.5	4	2.5	128.40
IRA3.3S	18-36	3.3	2727	9	78	427	200	1	2	1.5	128.40
IRA5S	18-36	5	2000	10	81	455	125	0.75	1.25	0.75	128.40
IRA9S	18-36	9	1111	10	83	445	100	0.50	1.00	0.50	128.40
IRA12S	18-36	12	833	10	78	475	75	0.50	1.00	0.25	128.40
IRA15S	18-36	15	687	10	78	475	75	0.50	0.75	0.25	128.40
IRA24S	18-36	24	417	10	83	445	75	0.50	0.75	0.25	128.40
IRA28S	18-36	28	357	10	83	445	100	0.50	0.75	0.25	128.40
IRA48S	18-36	48	208	10	84	440	150	0.50	0.50	0.25	128.40
IRA100S	18-36	100	100	10	81	455	250	0.50	0.50	0.50	180.60
IRB2S	36-60	2	3000	6	70	179	200	1.5	3.5	1.5	149.80
IRB3.3S	36-60	3.3	2727	9	76	247	200	1	2	1.5	149.80
IRB5S	36-60	5	2000	10	81	255	125	0.75	1.25	0.50	149.80
IRB9S	36-60	9	1111	10	83	250	100	0.50	0.75	0.50	149.80
IRB12S	36-60	12	833	10	83	260	75	0.50	0.75	0.25	149.80
IRB15S	36-60	15	687	10	83	250	75	0.50	0.75	0.25	149.80
IRB24S	36-60	24	417	10	83	260	75	0.50	0.75	0.25	149.80
IRB28S	36-60	28	357	10	83	260	100	0.50	0.50	0.25	149.80
IRB48S	36-60	48	208	10	84	250	150	0.50	0.50	0.25	149.80
IRB100S	36-60	100	100	10	81	255	250	0.50	0.50	0.50	187.25
IRC2S	18-60	2	3000	6	70	220	200	1.5	4	3	160.50
IRC3.3S	18-60	3.3	2727	9	76	304	200	1	2	1.5	160.50
IRC5S	18-60	5	2000	10	81	320	125	0.75	1.25	1.00	160.50
IRC9S	18-60	9	1111	10	83	310	100	0.50	0.75	0.75	160.50
IRC12S	18-60	12	833	10	83	310	75	0.50	0.75	0.50	160.50
IRC15S	18-60	15	687	10	83	310	75	0.50	0.75	0.50	160.50
IRC24S	18-60	24	417	10	83	310	75	0.50	0.75	0.50	160.50
IRC28S	18-60	28	357	10	83	310	100	0.50	0.50	0.50	160.50
IRC48S	18-60	48	208	10	84	305	150	0.50	0.50	0.50	160.50
IRC100S	18-60	100	100	10	81	310	250	0.50	0.50	0.75	200.63

*Measurements taken with input voltage set at mid value.

‡ 10% minimum load required

Ordering Instructions: No minimum. Net 30 days F.O.B. Pelham, New York



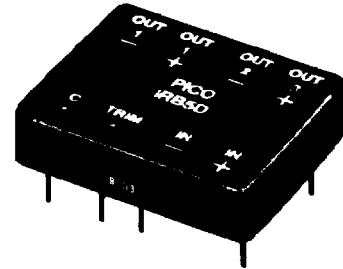
Typical Weight: 95 Grams

This series of high efficiency, wide input range, encapsulated regulators come in 75 different models. These units feature a 500 VOLT DC input to output isolation in both single and dual output models. The IR Series will operate over a temperature range of -25°C TO +70°C with no heat sink or electrical derating. These units are excellent for applications where input voltage varies dramatically, yet a high efficiency and output voltage regulation must be maintained.

TYPICAL CHARACTERISTICS:
Test conditions: 25°C ambient
Operating temperature: -25° C to +70° C ambient
Output voltage tolerance: ± 1% at typical input voltage
Output voltage temperature coefficient: 0.02%/°C
Storage temperature: -55°C to 125°C
Short circuit protection: Temporary
Operating frequency: 40 Khtz, typ.

SERIES IR - DUAL OUTPUT

PICO PART NUMBER	INPUT VOLTAGE RANGE	OUTPUT VOLTAGE DC PER OUTPUT	MAX. LOAD CURRENT mA PER OUTPUT	MAX OUTPUT POWER (watts) PER OUTPUT	EFF. @ FULL LOAD TYPICAL (%)*	INPUT CURRENT FULL LOAD TYPICAL (mA)*	OUT VOLT RIPPLE @ FULL LD. 1-1 MHz BW mv p-p	OUT VOLT TOLERANCE (±%)*	VLD. REG. 25%-100% LOAD‡ (±%)*	LINE REGULATION (±%)*	PRICE 1-24
IRE5D	5-15	5	600	3	80	750	175	0.75	2.00	2.00	155 15
IRE9D	5-15	9	444	4	80	1000	150	0.50	1.50	1.00	155 15
IRE12D	5-15	12	333	4	78	1025	150	0.50	1.50	1.00	155 15
IRE15D	5-15	15	267	4	78	1025	150	0.50	1.50	1.00	155 15
IRE24D	5-15	24	167	4	82	975	150	0.50	0.75	1.00	155 15
IRE28D	5-15	28	143	4	83	965	200	0.50	0.50	0.50	155 15
IRE48D	5-15	48	83	4	83	965	250	0.50	0.50	0.50	155 15
IRF5D	8-24	5	1000	5	80	780	200	0.75	1.50	1.75	155 15
IRF9D	8-24	9	556	5	81	770	150	0.50	0.75	1.25	155 15
IRF12D	8-24	12	417	5	78	800	150	0.50	0.75	0.75	155 15
IRF15D	8-24	15	333	5	78	800	150	0.50	0.75	0.75	155 15
IRF24D	8-24	24	208	5	83	755	150	0.50	0.75	0.75	155 15
IRF28D	8-24	28	179	5	83	755	200	0.50	0.50	0.50	155 15
IRF48D	8-24	48	104	5	84	745	250	0.50	0.50	0.50	155 15
IRA5D	18-36	5	1000	5	81	455	125	0.75	1.25	0.75	155 15
IRA9D	18-36	9	556	5	83	445	100	0.50	1.00	0.50	155 15
IRA12D	18-36	12	417	5	78	475	75	0.50	1.00	0.25	155 15
IRA15D	18-36	15	333	5	78	475	75	0.50	0.75	0.25	155 15
IRA24D	18-36	24	208	5	83	445	75	0.50	0.75	0.25	155 15
IRA28D	18-36	28	179	5	83	445	100	0.50	0.75	0.25	155 15
IRA48D	18-36	48	104	5	84	440	150	0.50	0.50	0.25	155 15
IRB5D	36-60	5	1000	5	81	255	125	0.75	1.25	0.50	176 55
IRB9D	36-60	9	556	5	83	250	100	0.50	0.75	0.50	176 55
IRB12D	36-60	12	417	5	83	250	75	0.50	0.75	0.25	176 55
IRB15D	36-60	15	333	5	83	250	75	0.50	0.75	0.25	176 55
IRB24D	36-60	24	208	5	83	250	75	0.50	0.75	0.25	176 55
IRB28D	36-60	28	179	5	83	250	100	0.50	0.50	0.25	176 55
IRB48D	36-60	48	104	5	84	250	150	0.50	0.50	0.25	176 55
IRC5D	18-60	5	1000	5	81	320	125	0.75	1.25	1.00	187 25
IRC9D	18-60	9	556	5	83	310	100	0.50	0.75	0.75	187 25
IRC12D	18-60	12	417	5	83	310	75	0.50	0.75	0.50	187 25
IRC15D	18-60	15	333	5	83	310	75	0.50	0.75	0.50	187 25
IRC24D	18-60	24	208	5	83	310	75	0.50	0.75	0.50	187 25
IRC28D	18-60	28	179	5	83	310	100	0.50	0.50	0.50	187 25
IRC48D	18-60	48	104	5	84	305	150	0.50	0.50	0.50	187 25



No Heat Sink or Electrical Derating Required

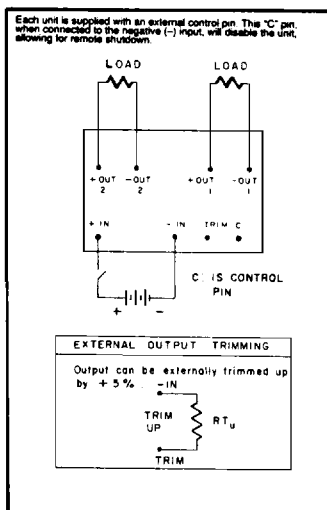
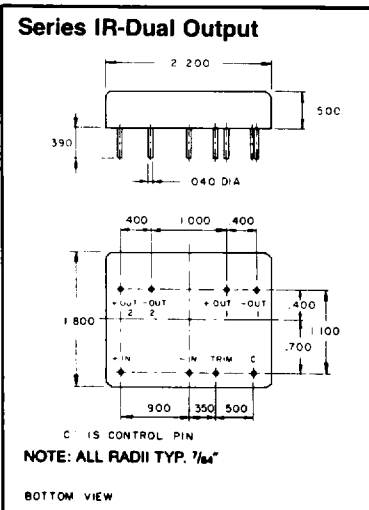
OPTIONS AVAILABLE
 • Expanded operating temp. (-55°C to +85°C)
 • Stabilization Bake (125°C ambient)
 • Temperature Cycle (-55°C to +125°C)
 • Hi Temp, full power burn in (100% power, 125°C case temp)

Low Profile Less Than 0.5" Height

*Measurements taken with input voltage set at mid value.

‡ 10% minimum load required

Ordering Instructions: No minimum. Net 30 days F.O.B. Pelham, New York



For immediate engineering assistance or to place an order—

PICO Electronics, Inc.

143 Sparks Ave., Pelham, NY 10803-1837
 FAX: 914-738-8225
 Internet: <http://www.picoelectronics.com>
 E-Mail: HLSC73A@prodigy.com

Delivery—stock to one week

Typical Weight: 95 Grams