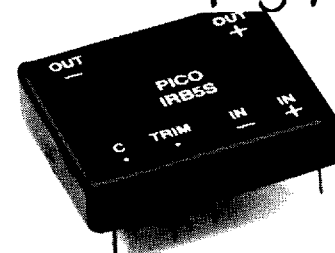


T-57-11

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**

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**

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
IRE5S	5-15	5	1200	6	80	750	175	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	667	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	965	250	0.50	0.50	0.50	128.40
IRE100S	5-15	100	60	6	80	750	300	0.50	0.50	0.75	160.50
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	667	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
IRF100S	8-24	100	100	10	80	780	300	0.50	0.50	0.75	160.50
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	667	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	160.50
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	250	75	0.50	0.75	0.25	149.80
IRB15S	36-60	15	667	10	83	250	75	0.50	0.75	0.25	149.80
IRB24S	36-60	24	417	10	83	250	75	0.50	0.75	0.25	149.80
IRB28S	36-60	28	357	10	83	250	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
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	667	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.

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

† 10% minimum load required.

For immediate engineering assistance
or to place an order—

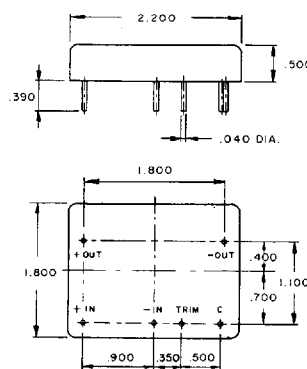
Call Toll Free 800-431-1064

PICO Electronics, Inc.

453 N. MacQuesten Pkwy.
Mt. Vernon, N.Y. 10552

914-699-5514 • FAX 914-699-5565

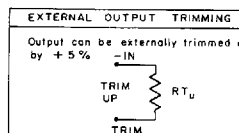
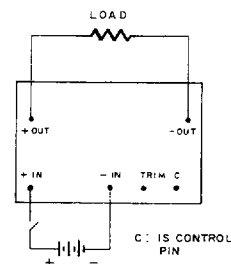
**Delivery—
stock to one week**

Series IR-Single Output

C: IS CONTROL PIN
NOTE: ALL RADII TYP. 7/64"

BOTTOM VIEW

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.



Typical Weight: 95 Grams

T-57-11

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: $\pm 1\%$ 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.

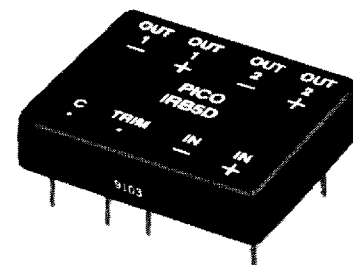
SERIES IR - DUAL OUTPUT

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 L.D. 1-1 MHz BW mv p-p	OUT VOLT TOLERANCE ($\pm\%$)	VLD. REG. 25%-100% LOAD ($\pm\%$)	LINE REGULATION ($\pm\%$)	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

*Measurements taken with input voltage set at mid value.

† 10% minimum load required.

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

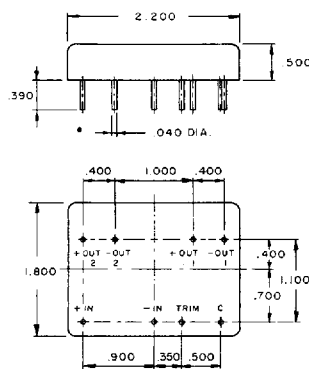


**No Heat Sink
or Electrical
Derating Required**

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)

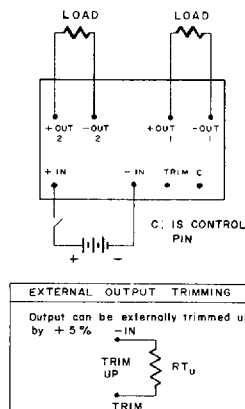
**Low Profile
Less Than
0.5" Height**

Series IR-Dual Output

NOTE: ALL RADII TYP. 7/64"

BOTTOM VIEW

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.



Typical Weight: 95 Grams

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

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Mt. Vernon, N.Y. 10552

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