

Series IR & SIR

10W Isolated Regulated Low Profile DC-DC Converter



PRODUCT OVERVIEW

The IR & SIR series are isolated DC-DC converter with wide input range and tight regulation specifications. These modules have trim and control features. Single and dual isolated output models are standard. They can operate up to 10W over the temperature range of -25°C to +70°C without derating, a heat sink or active cooling.



FEATURES

- Up to 10W output at +70°C ambient
 - Low profile – 0.500" height
 - Up to 3.33:1 input voltage range
 - 2 to 100V output models
 - Six-sided shielded case (Series SIR)
 - Control feature
 - Trimmable output
 - Input/output isolation
 - Single and dual isolated output
 - No external components required
 - No heat sink or derating required
- Contact Pico for part number of available options:
- Expanded operating temp: -55°C to +85°C
 - Select screening per MIL-STD-883:
 - Stabilization Bake
 - Temperature Cycle
 - Burn-In
 - Special Input Voltage, Output Voltage, Isolation Voltage or Output Power

IR	E	28	S
MOUNTING TYPE	INPUT VOLTAGE RANGE	NOM. OUTPUT VOLTAGE	NUMBER OF OUTPUTS
IR = THROUGH HOLE SIR = SURFACE MOUNT	E = 5 to 15V F = 8 to 24V A = 18 to 36V B = 36 to 60V C = 18 to 60V	2 = 2V 3.3 = 3.3V 5 = 5V 5.2 = 5.2V 9 = 9V 12 = 12V 15 = 15V 24 = 24V 28 = 28V 48 = 48V 100 = 100V	S = SINGLE D = DUAL

MODEL LIST - SERIES IR - THROUGH HOLE**SINGLE OUTPUT**

Through Hole Part Number	Output Voltage [VDC]	Output Current		Output Power [W]	Efficiency ⁽¹⁾ [%] typ.	Input Current ⁽¹⁾ [%] typ.	Line Regulation [±%]	Load Regulation 25-100% [±%]	Output Ripple @ 1MHz BW [mVp-p]
		Min. [mA]	Max. [mA]						
IRE2S	2	200	2000	4	68	588	5.5	5	250
IRE3.3S	3.3	151.5	1515	5	76	658	5	3.5	250
IRE5S	5	120	1200	6	80	750	2	2	175
IRE5.2S	5.2	115.4	1154	6	80	750	2	2	175
IRE9S	9	88.9	889	8	80	1000	1	1.5	150
IRE12S	12	66.7	667	8	78	1025	1	1.5	150
IRE15S	15	53.3	533	8	78	1025	1	1.5	150
IRE24S	24	33.3	333	8	82	975	1	0.75	150
IRE28S	28	28.6	286	8	83	965	0.5	0.5	200
IRE48S	48	16.7	167	8	83	905	0.5	0.5	250
IRE100S	100	6	60	6	80	750	0.75	0.5	300
IRF2S	2	250	2500	5	70	446	4	4	250
IRF3.3S	3.3	242.4	2424	8	77	650	2.5	2.5	200
IRF5S	5	200	2000	10	80	780	1.75	1.5	200
IRF5.2S	5.2	192.3	1923	10	80	780	1.75	1.5	200
IRF9S	9	111.1	1111	10	81	770	1.25	0.75	150
IRF12S	12	83.3	833	10	78	800	0.75	0.75	150
IRF15S	15	68.7	687	10	78	800	0.75	0.75	150
IRF24S	24	41.7	417	10	83	755	0.75	0.75	150
IRF28S	28	35.7	357	10	83	755	0.5	0.5	200
IRF48S	48	20.8	208	10	84	745	0.5	0.5	250
IRF100S	100	10	100	10	80	780	0.75	0.5	300
IRA2S	2	300	3000	6	71	313	2.5	4	200
IRA3.3S	3.3	272.7	2727	9	78	427	1.5	2	200
IRA5S	5	200	2000	10	81	455	0.75	1.25	125
IRA5.2S	5.2	192.3	1923	10	81	455	0.75	1.25	125
IRA9S	9	111.1	1111	10	83	445	0.5	1	100
IRA12S	12	83.3	833	10	78	475	0.25	1	75
IRA15S	15	68.7	687	10	78	475	0.25	0.75	75
IRA24S	24	41.7	417	10	83	445	0.25	0.75	75
IRA28S	28	35.7	357	10	83	445	0.25	0.75	100
IRA48S	48	20.8	208	10	84	440	0.25	0.5	150
IRA100S	100	10	100	10	81	455	0.5	0.5	250

MODEL LIST - SERIES IR - THROUGH HOLE**SINGLE OUTPUT**

Through Hole Part Number	Output Voltage [VDC]	Output Current		Output Power [W]	Efficiency ⁽¹⁾ [%] typ.	Input Current ⁽¹⁾ [%] typ.	Line Regulation [±%]	Load Regulation 25-100% [±%]	Output Ripple @ 1MHz BW [mVp-p]
		Min. [mA]	Max. [mA]						
IRB2S	2	300	3000	6	70	179	1.5	3.5	200
IRB3.3S	3.3	272.7	2727	9	76	247	1.5	2	200
IRB5S	5	200	2000	10	81	255	0.5	1.25	125
IRB5.2S	5.2	192.3	1923	10	81	255	0.5	1.25	125
IRB9S	9	111.1	1111	10	83	250	0.5	0.75	100
IRB12S	12	83.3	833	10	83	260	0.25	0.75	75
IRB15S	15	68.7	687	10	83	250	0.25	0.75	75
IRB24S	24	41.7	417	10	83	260	0.25	0.75	75
IRB28S	28	35.7	357	10	83	260	0.25	0.5	100
IRB48S	48	20.8	208	10	84	250	0.25	0.5	150
IRB100S	100	10	100	10	81	255	0.5	0.5	250
IRC2S	2	300	3000	6	70	220	3	4	200
IRC3.3	3.3	272.7	2727	9	76	304	1.5	2	200
IRC5S	5	200	2000	10	81	320	1	1.25	125
IRC5.2S	5.2	192.3	1923	10	81	320	1	1.25	125
IRC9S	9	111.1	1111	10	83	310	0.75	0.75	100
IRC12S	12	83.3	833	10	83	310	0.5	0.75	75
IRC15S	15	68.7	687	10	83	310	0.5	0.75	75
IRC24S	24	41.7	417	10	83	310	0.5	0.75	75
IRC28S	28	35.7	357	10	83	310	0.5	0.5	100
IRC48S	48	20.8	208	10	84	305	0.5	0.5	150
IRC100S	100	10	100	10	81	310	0.75	0.5	250

Note 1: Tested at nominal input voltage and full output load.

DUAL OUTPUT

Through Hole Part Number	Output Voltage Per Output [VDC]	Output Current Per Output		Output Power Per Output [W]	Efficiency ⁽¹⁾ [%] typ.	Input Current ⁽¹⁾ [%] typ.	Line Regulation [±%]	Load Regulation 25-100% [±%]	Output Ripple Per Output @ 1MHz BW [mVp-p]
		Min. [mA]	Max. [mA]						
IRE5D	5	60	600	3	80	750	2	2	175
IRE9D	9	44.4	444	4	80	1000	1	1.5	150
IRE12D	12	33.3	333	4	78	1025	1	1.5	150
IRE15D	15	26.7	267	4	78	1025	1	1.5	150
IRE24D	24	16.7	167	4	82	975	1	0.75	150
IRE28D	28	14.3	143	4	83	965	0.5	0.5	200
IRE48D	48	8.3	83	4	83	965	0.5	0.5	250

Note 1: Tested at nominal input voltage and full output load.

Note 2: Dual output loads must be balanced.

MODEL LIST - SERIES IR - THROUGH HOLE**DUAL OUTPUT**

Through Hole Part Number	Output Voltage Per Output [VDC]	Output Current Per Output		Output Power Per Output [W]	Efficiency ⁽¹⁾ [%] typ.	Input Current ⁽¹⁾ [%] typ.	Line Regulation [±%]	Load Regulation 25-100% [±%]	Output Ripple Per Output @ 1MHz BW [mVp-p]
		Min. [mA]	Max. mA]						
IRF5D	5	100	1000	5	80	780	1.75	1.5	200
IRF9D	9	55.6	556	5	81	770	1.25	0.75	150
IRF12D	12	41.7	417	5	78	800	0.75	0.75	150
IRF15D	15	33.3	333	5	78	800	0.75	0.75	150
IRF24D	24	20.8	208	5	83	755	0.75	0.75	150
IRF28D	28	17.9	179	5	83	755	0.5	0.5	200
IRF48D	48	10.4	104	5	84	745	0.5	0.5	250
IRA5D	5	100	1000	5	81	455	0.75	1.25	125
IRA9D	9	55.6	556	5	83	445	0.5	1	100
IRA12D	12	41.7	417	5	78	475	0.25	1	75
IRA15D	15	33.3	333	5	78	475	0.25	0.75	75
IRA24D	24	20.8	208	5	83	445	0.25	0.75	75
IRA28D	28	17.9	179	5	83	445	0.25	0.75	100
IRA48D	48	10.4	104	5	84	440	0.25	0.5	150
IRB5D	5	100	1000	5	81	255	0.5	1.25	125
IRB9D	9	55.6	556	5	83	250	0.5	0.75	100
IRB12D	12	41.7	417	5	83	250	0.25	0.75	75
IRB15D	15	33.3	333	5	83	250	0.25	0.75	75
IRB24D	24	20.8	208	5	83	250	0.25	0.75	75
IRB28D	28	17.9	179	5	83	250	0.25	0.5	100
IRB48D	48	10.4	104	5	84	250	0.25	0.5	150
IRC5D	5	100	1000	5	81	320	1	1.25	125
IRC9D	9	55.6	556	5	83	310	0.75	0.75	100
IRC12D	12	41.7	417	5	83	310	0.5	0.75	75
IRC15D	15	33.3	333	5	83	310	0.5	0.75	75
IRC24D	24	20.8	208	5	83	310	0.5	0.75	75
IRC28D	28	17.9	179	5	83	310	0.5	0.5	100
IRC48D	48	10.4	104	5	84	305	0.5	0.5	150

Note 1: Tested at nominal input voltage and full output load.

Note 2: Dual output loads must be balanced.

MODEL LIST - SERIES SIR - SURFACE MOUNT**SINGLE OUTPUT**

Surface Mount Part Number	Output Voltage [VDC]	Output Current		Output Power [W]	Efficiency ⁽¹⁾ [%] typ.	Input Current ⁽¹⁾ [%] typ.	Line Regulation [±%]	Load Regulation 25-100% [±%]	Output Ripple @ 1MHz BW [mVp-p]
		Min. [mA]	Max. [mA]						
SIRE3.3S	3.3	151.5	1515	5	78	641	2.00	2.00	150
SIRE5S	5	100	1000	5	78	640	2.00	1.50	150
SIRE5.2S	5.2	96.1	961	5	78	640	2.00	1.50	150
SIRE9S	9	66.7	667	6	78	770	1.50	1.25	125
SIRE12S	12	50	500	6	78	770	1.25	1.25	125
SIRE15S	15	40	400	6	78	770	1.25	1.25	125
SIRE24S	24	25	250	6	80	750	1.25	1.00	125
SIRE28S	28	21.4	214	6	81	740	1.00	1.00	125
SIRE48S	48	12.5	125	6	81	740	1.00	1.00	400
SIRE100S	100	6	60	6	81	740	1.00	1.00	600
SIRF3.3S	3.3	212.1	2121	7	75	583	2.50	3.00	200
SIRF5S	5	160	1600	8	79	635	2.00	1.50	150
SIRF5.2S	5.2	153.8	1538	8	79	635	2.00	1.50	150
SIRF9S	9	88.9	889	8	79	635	1.50	1.25	125
SIRF12S	12	66.7	667	8	79	635	1.25	1.25	125
SIRF15S	15	53.3	533	8	79	635	1.25	1.25	125
SIRF24S	24	33.3	333	8	80	625	1.25	1.00	125
SIRF28S	28	28.6	286	8	81	615	1.00	1.00	125
SIRF48S	48	16.7	167	8	82	610	1.00	1.00	400
SIRF100S	100	8	80	8	82	610	1.00	1.00	600
SIRA3.3S	3.3	242.4	2424	8	78	380	2.00	2.00	150
SIRA5S	5	160	1600	8	78	380	0.75	2.00	125
SIRA5.2S	5.2	153.8	1538	8	78	380	0.75	2.00	125
SIRA9S	9	88.9	889	8	78	380	0.50	2.00	100
SIRA12S	12	66.7	667	8	78	380	0.50	2.00	100
SIRA15S	15	53.3	533	8	78	380	0.50	1.50	100
SIRA24S	24	33.3	333	8	79	375	0.25	1.50	100
SIRA28S	28	28.6	286	8	80	370	0.25	1.50	100
SIRA48S	48	16.7	167	8	80	370	0.25	1.00	400
SIRA100S	100	8	80	8	80	370	0.50	1.00	600

MODEL LIST - SERIES SIR - SURFACE MOUNT**SINGLE OUTPUT**

Surface Mount Part Number	Output Voltage [VDC]	Output Current		Output Power [W]	Efficiency ⁽¹⁾ [%] typ.	Input Current ⁽¹⁾ [%] typ.	Line Regulation [±%]	Load Regulation 25-100% [±%]	Output Ripple @ 1MHz BW [mVp-p]
		Min. [mA]	Max. [mA]						
SIRB3.3S	3.3	242.4	2424	8	79	211	2.00	2.00	150
SIRB5S	5	160	1600	8	80	210	0.50	1.25	100
SIRB5.2S	5.2	153.8	1538	8	80	210	0.50	1.25	100
SIRB9S	9	88.9	889	8	81	205	0.25	1.00	100
SIRB12S	12	66.7	667	8	81	205	0.25	1.00	100
SIRB15S	15	53.3	533	8	81	205	0.25	1.00	100
SIRB24S	24	33.3	333	8	82	200	0.25	0.75	100
SIRB28S	28	28.6	286	8	82	200	0.25	0.75	100
SIRB48S	48	16.7	167	8	82	200	0.25	0.75	400
SIRB100S	100	8	80	8	82	200	0.50	1.00	600
SIRC3.3S	3.3	242.4	2424	8	78	263	2.00	2.00	150
SIRC5S	5	160	1600	8	79	260	1.25	2.00	125
SIRC5.2S	5.2	153.8	1538	8	79	260	1.25	2.00	125
SIRC9S	9	88.9	889	8	80	255	0.75	1.00	100
SIRC12S	12	66.7	667	8	80	255	0.75	1.00	100
SIRC15S	15	53.3	533	8	81	255	0.75	1.00	100
SIRC24S	24	33.3	333	8	82	250	0.50	0.75	100
SIRC28S	28	28.6	286	8	82	250	0.50	0.75	100
SIRC48S	48	16.7	167	8	82	250	0.50	0.75	400
SIRC100S	100	8	80	8	82	250	0.50	1.00	600

Note 1: Tested at nominal input voltage and full output load.

DUAL OUTPUT

Surface Mount Part Number	Output Voltage Per Output [VDC]	Output Current Per Output		Output Power Per Output [W]	Efficiency ⁽¹⁾ [%] typ.	Input Current ⁽¹⁾ [%] typ.	Line Regulation [±%] max	Load Regulation 25-100% [±%]	Output Ripple Per Output @ 1MHz BW [mVp-p]
		Min. [mA]	Max. [mA]						
SIRE5D	5	50	500	2.5	78	640	2.00	1.50	150
SIRE9D	9	33.3	333	3	78	770	1.50	1.25	125
SIRE12D	12	25	250	3	78	770	1.25	1.25	125
SIRE15D	15	20	200	3	78	770	1.25	1.25	125
SIRE24D	24	12.5	125	3	80	750	1.25	1.00	125
SIRE28D	28	10.7	107	3	81	740	1.00	1.00	125
SIRE48D	48	6.3	63	3	81	740	1.00	1.00	400

Note 1: Tested at nominal input voltage and full output load.

Note 2: Dual output loads must be balanced.

MODEL LIST - SERIES SIR - SURFACE MOUNT**DUAL OUTPUT**

Surface Mount Part Number	Output Voltage Per Output [VDC]	Output Current Per Output		Output Power Per Output [W]	Efficiency ⁽¹⁾ [%] typ.	Input Current ⁽¹⁾ [%] typ.	Line Regulation [±%]	Load Regulation 25-100% [±%]	Output Ripple Per Output @ 1MHz BW [mVp-p]
		Min. [mA]	Max. [mA]						
SIRF5D	5	80	800	4	79	635	2.00	1.50	150
SIRF9D	9	44.4	444	4	79	635	1.50	1.25	125
SIRF12D	12	33.3	333	4	79	635	1.25	1.25	125
SIRF15D	15	26.7	267	4	79	635	1.25	1.25	125
SIRF24D	24	16.7	167	4	80	625	1.25	1.00	125
SIRF28D	28	14.3	143	4	81	615	1.00	1.00	125
SIRF48D	48	8.3	83	4	82	610	1.00	1.00	400
SIRA5D	5	80	800	4	78	380	0.75	2.00	125
SIRA9D	9	44.4	444	4	78	380	0.50	2.00	100
SIRA12D	12	33.3	333	4	78	380	0.50	2.00	100
SIRA15D	15	26.7	267	4	78	380	0.50	1.50	100
SIRA24D	24	16.7	167	4	79	375	0.25	1.50	100
SIRA28D	28	14.3	143	4	80	370	0.25	1.50	100
SIRA48D	48	8.3	83	4	80	370	0.25	1.00	400
SIRB5D	5	80	800	4	80	210	0.50	1.25	100
SIRB9D	9	44.4	444	4	81	205	0.25	1.00	100
SIRB12D	12	33.3	333	4	81	205	0.25	1.00	100
SIRB15D	15	26.7	267	4	81	205	0.25	1.00	100
SIRB24D	24	16.7	167	4	82	200	0.25	0.75	100
SIRB28D	28	14.3	143	4	82	200	0.25	0.75	100
SIRB48D	48	8.3	83	4	82	200	0.25	0.75	400
SIRC5D	5	80	800	4	79	260	1.25	2.00	125
SIRC9D	9	44.4	444	4	80	255	0.75	1.00	100
SIRC12D	12	33.3	333	4	80	255	0.75	1.00	100
SIRC15D	15	26.7	267	4	81	255	0.75	1.00	100
SIRC24D	24	16.7	167	4	82	250	0.50	0.75	100
SIRC28D	28	14.3	143	4	82	250	0.50	0.75	100
SIRC48D	48	8.3	83	4	82	250	0.50	0.75	400

Note 1: Tested at nominal input voltage and full output load.

Note 2: Dual output loads must be balanced.

SPECIFICATIONS (Nominal V_{IN} , Full Load, $T_A = +25^{\circ}\text{C}$, 1 hour warm up unless otherwise specified)**INPUT**

Parameter	Condition	Min.	Typ.	Max.	Units
Input Voltage Range	IRE/SIRE models	5	10	15	VDC
	IRF/SIRF models	8	16	24	
	IRA/SIRA models	18	27	36	
	IRB/SIRB models	36	48	60	
	IRC/SIRC models	18	39	60	

OUTPUT

Parameter	Condition		Min.	Typ.	Max.	Units
Output Voltage Tolerance (Nominal V _{IN} , Full Load)	Series IR	2V output models	-	-	1.5	±%
		3.3V output models	-	-	1	
	Series SIR	3.3V output models	-	-	3	
	5V & 5.2V output models		-	-	0.75	
	All other output models		-	-	0.5	

ENVIRONMENTAL

Parameter	Condition	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient without derating	-25	-	+70	°C
Storage Temperature Range	Ambient	-55	-	+105	°C
Temperature Coefficient		-	-	0.02	%/°C
Cooling	Free Air Convection				

GENERAL

Parameter	Condition	Min.	Typ.	Max.	Units
Isolation Voltage	Input to output	500	-	-	VDC
	OUT1 to OUT2	500	-	-	
Switching Frequency		-	40	-	kHz
Size (L x W x H)	Series IR	2.2 x 1.8 x 0.5 (55.88 x 45.72 x 12.7)			inches (mm)
	Series SIR	1.82 x 1.5 x 0.53 (46.228 x 38.1 x 13.462)			
Weight	Series IR	-	95	-	grams
	Series SIR	-	48	-	
Case	Series IR	6-Sided Epoxy Insulated Metal			
	Series SIR	Glass Reinforced Polymer			
Potting	Vacuum Impregnated Epoxy				
Tube Packaging	Series SIR	1.96 x 0.975 x 20 (49.784 x 24.765 x 508)			inches (mm)
Box Packaging (W x L x H)	Series IR	8 x 7.5 x 1.5 (203.2 x 190.5 x 38.1) or 12 x 9 x 1.5 (304.8 x 228.6 x 38.1)			inches (mm)
Moisture Sensitivity Level	Series SIR	IPC / JEDEC J-STD-020, Level 3			

PROTECTION & FEATURES

Parameter	Condition	Min.	Typ.	Max.	Units
Shortcircuit	Temporary				
Shutdown (C)	Non-latched shutdown, Self-recovery	Shutdown	Connect to -IN		
		Restart	OPEN		
Output Voltage Trim (TRIM)	Trim up only	0	-	5	%

SPECIFICATIONS (Nominal V_{IN} , Full Load, $T_A = +25^{\circ}\text{C}$, 1 hour warm up unless otherwise specified)**DESIGNED TO MEET**

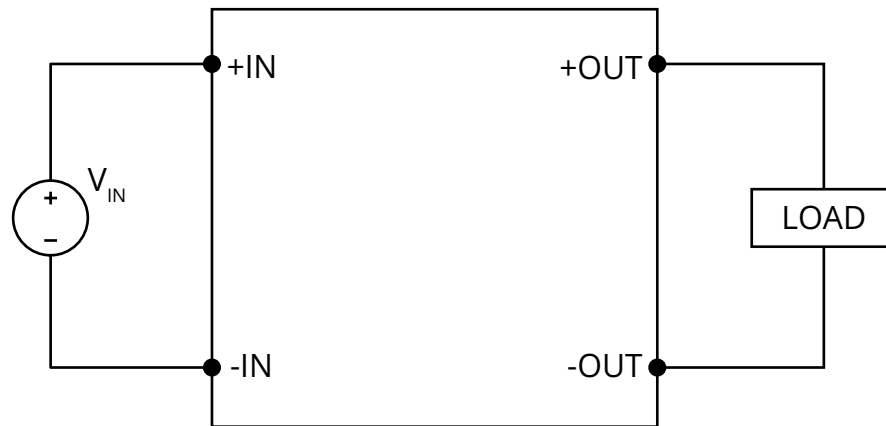
Test	Referenced Standard	Description
Vibration	MIL-STD-202	Method 204, Vibration, High Frequency, Condition D
Shock	MIL-STD-202	Method 213, Shock (Specified Pulse), Condition I
Humidity	MIL-STD-202	Method 106, Moisture Resistance
Altitude	MIL-STD-202	Method 105, Barometric Pressure (Reduced), Condition D

OPTIONS AVAILABLE – CONTACT PICO FOR PART NUMBER

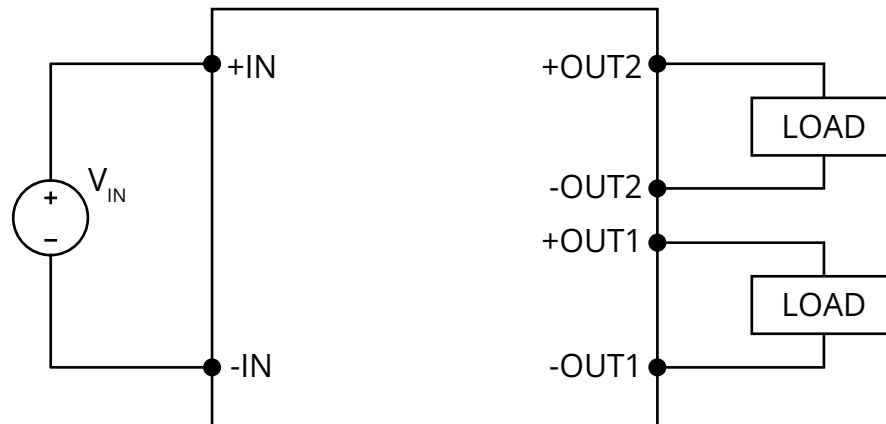
Parameter	Referenced Standard	Description
Stabilization Bake	MIL-STD-883	Referenced Method 1008 Non-operating maximum storage temperature for 24 hours
Temperature Cycle	MIL-STD-883	Referenced Method 1010 Non-operating at temperature extremes, 15 mins/temp, 10 cycles
Burn-In	MIL-STD-883	Referenced Method 1015 Max operating temperature for 160 hours
Expanded Ambient Operating Temperature		-55°C to +85°C

TYPICAL CONNECTION CIRCUIT

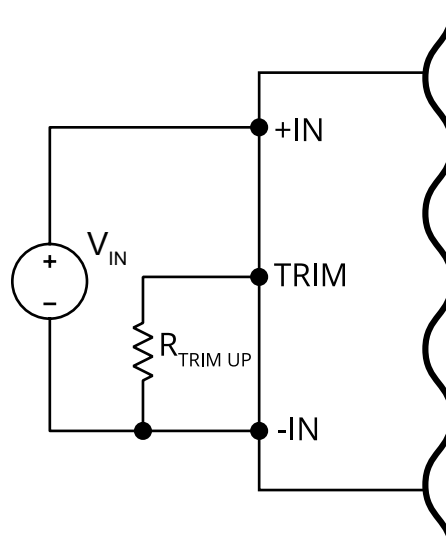
SINGLE OUTPUT



DUAL OUTPUT



TRIM



Note: Use 50k Ω , 1/4W trim pot between TRIM and -IN. Reduce resistance to raise output voltage to 5% maximum. Raising the output voltage beyond 5% could cause damage to the module.

SERIES IR - THROUGH HOLE

Technical drawing showing the front and top views of a component with dimensions in inches and millimeters.

Front View Dimensions:

- Overall Width: 2.200 [55.880]
- Overall Height: .500 [12.700]
- Radius (Top Right): R.110 [R2.794]
- Leg Width: .390 [9.906]
- Leg Spacing: $\varnothing .040$ [$\varnothing 1.016$] X 6

Top View Dimensions:

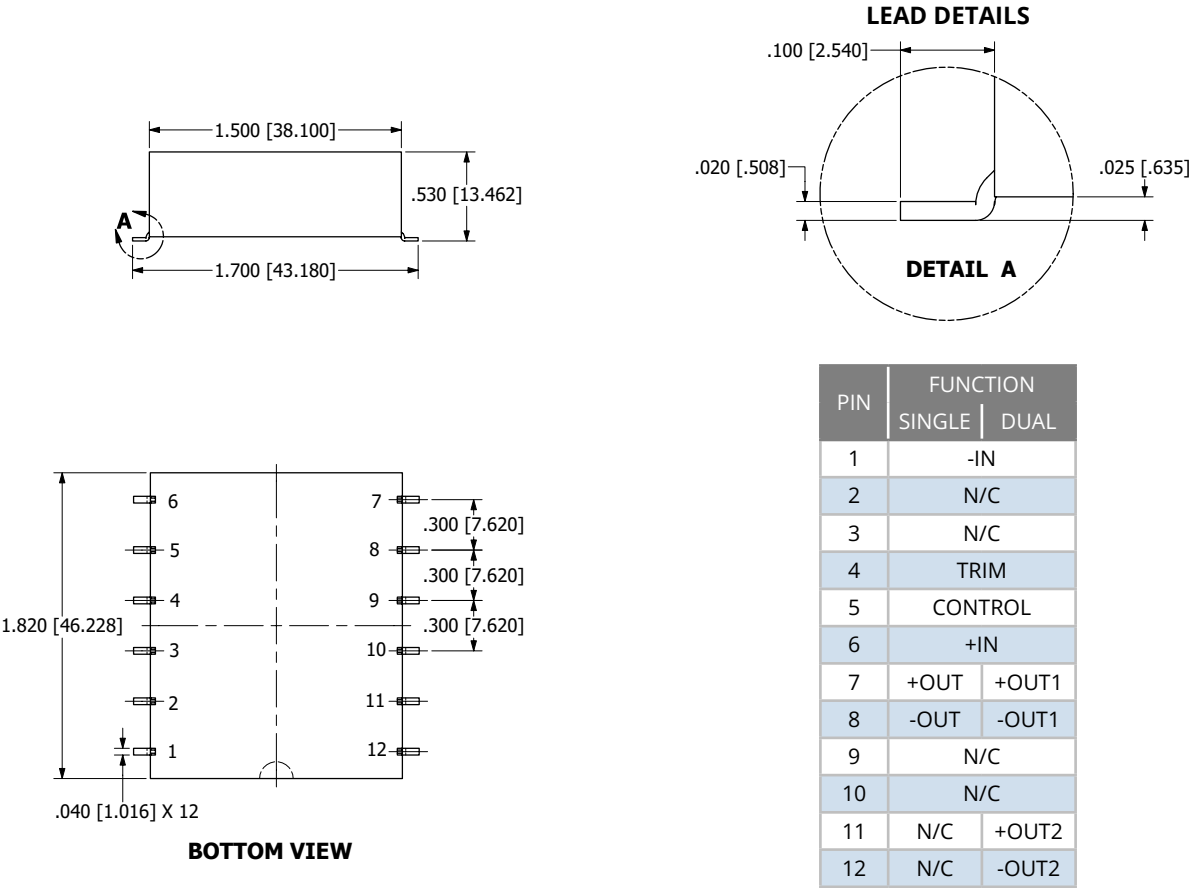
- Overall Width: 1.800 [45.720]
- Overall Height: 1.800 [45.720]
- Radius (Top Right): R.110 [R2.794]
- Mounting Hole Spacing (Horizontal): .900 [22.860]
- Mounting Hole Spacing (Vertical): .700 [17.780]
- Mounting Hole Diameter: .350 [8.890]
- Mounting Hole Position (Right): .500 [12.700]
- Mounting Hole Labels: +OUT, -OUT, +IN, -IN, TRIM, C

The drawing shows the top and bottom views of a PCB. The top view is a rectangle with a width of 2.200 [55.880] and a height of 1.800 [45.720]. It features a central cutout with a width of 1.000 [25.400] and a height of 0.500 [12.700]. The cutout has rounded corners with a radius of R.110 [R2.794]. There are four mounting holes, each with a diameter of Ø.040 [Ø1.016], spaced 0.400 [10.160] apart. The bottom view is a rectangle with a width of 2.200 [55.880] and a height of 1.800 [45.720]. It features a central cutout with a width of 1.000 [25.400] and a height of 0.700 [17.780]. The cutout has rounded corners with a radius of R.110 [R2.794]. There are four mounting holes, each with a diameter of Ø.040 [Ø1.016], spaced 0.400 [10.160] apart. The bottom view also shows four input/output points labeled +IN, -IN, TRIM, and C, spaced 0.350 [8.890] apart. The overall dimensions are 2.200 [55.880] by 1.800 [45.720].

The diagram shows the orthographic projection of a truncated cone. The front view on the right is a trapezoid representing the cone's profile. The top view on the left consists of two concentric circles, with the outer circle representing the base and the inner circle representing the top surface. Dashed lines indicate the alignment between the two views.

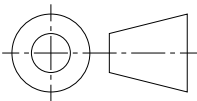
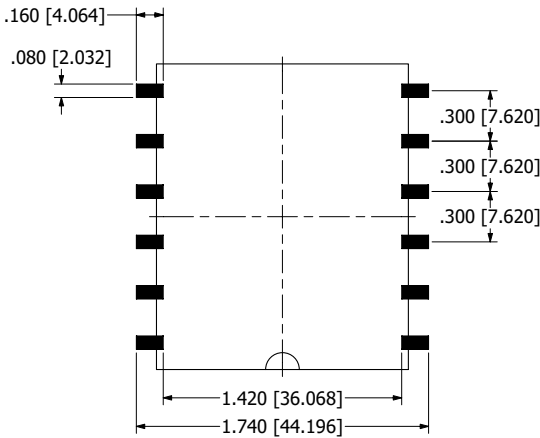
MECHANICAL DRAWINGS

SERIES SIR - SUFRACE MOUNT

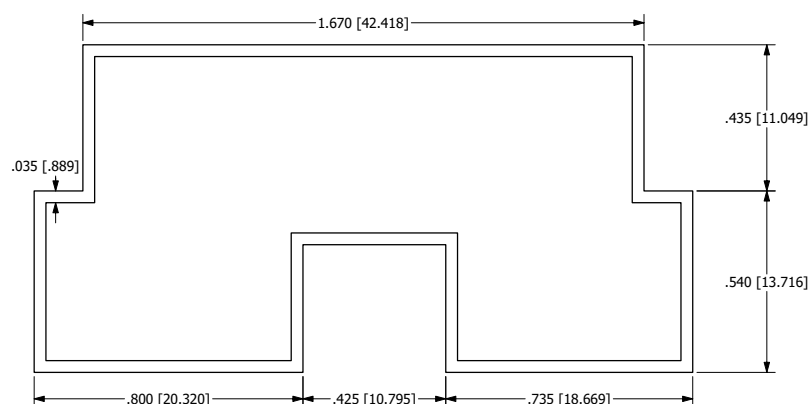


NOTES
a. ALL DIMENSIONS ARE IN INCHES, [] = MM

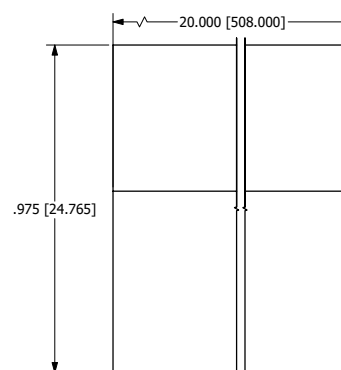
RECOMMENDED LAND PATTERN DIMENSIONS - SERIES SIR



TUBE PACKAGING - SERIES SIR

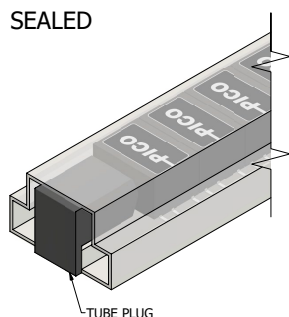


PLAN VIEW

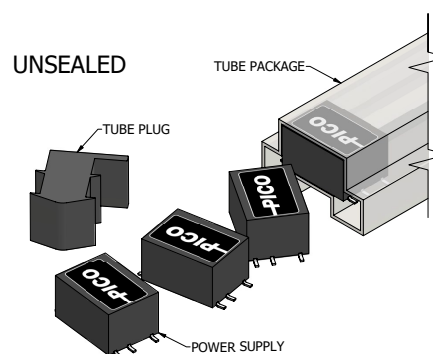


ELEVATION VIEW

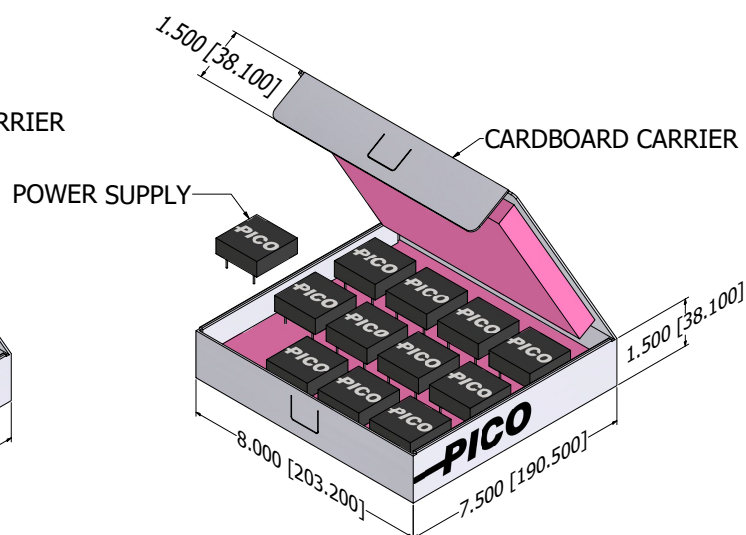
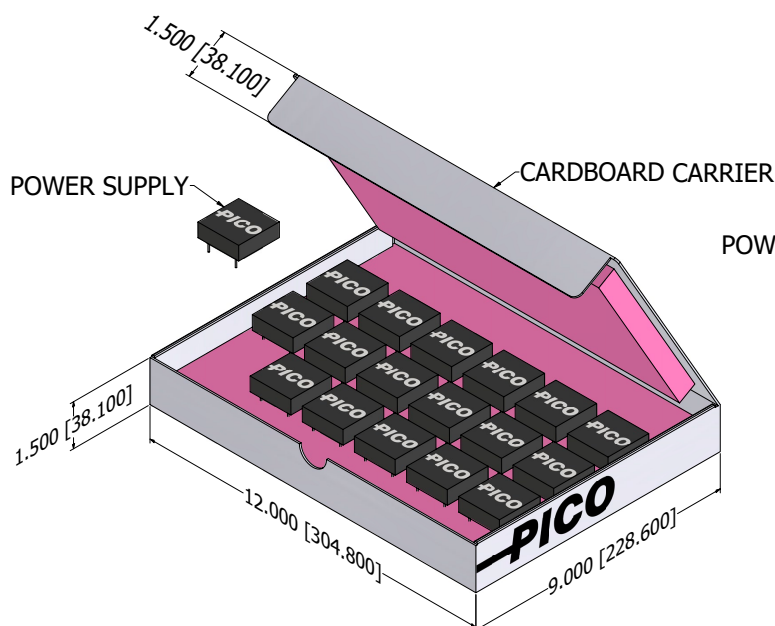
SEALED



UNSEALED



BOX PACKAGING - BULK - SERIES IR



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