Series 16080

3.25 – 5 Watt Hybrid

For demanding industrial applications not requiring military specifications

Features

- Hermetic packaging protects against harsh environments
- Built-in EMI filter limits conducted emissions and reduces transient susceptibility
- Short circuit proof – inherent dual mode overcurrent protection
- Fixed frequency operation offers low ripple and fast load transient response
- Power on/off – ground INH to shut output: low quiescent current
- Precision RF feedback – no optical devices used
- Parallelable – for higher output prime or redundant power applications

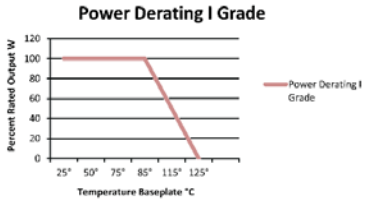
Specifications

INPUT: 24 VDC nominal
Range: 18 to 50 VDC
Operates through input transients of up to 80 V

ISOLATION:
Input to case: 100 MOhms at 500 VDC
Input to output: 100 MOhms at 500 VDC
Output to case: 10 MOhms at 100 VDC

ENVIRONMENT:
Storage temperature: -55°C to +150°C
Mechanical Shock: 50 G's, 11 mSec 1/2 sine pulse, 3X each axis
Random Vibration: 30 G's 50 – 2000Hz, 6dB/octave ramp, .6 PSD, 32g RMS overall

DERATING:
Full Power Output at T_{case} = +85°C
Linearly derates to 50% at T_{case} = +115°C



WEIGHT: 20 grams typical

SINGLE OUTPUT DEVICES		16080-S02 (2W)			16080-S02.5 (2.5W)			16080-S03.3 (3.3W)			16080-S05 (5W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+1.9	+2.0	+2.1	+2.4	+2.5	+2.6	+3.2	+3.3	+3.4	+4.9	+5.0	+5.1
Output current	$V_{in\,min} - V_{in\,max}$	—	—	1A	—	—	1A	—	—	1A	—	—	1A
Efficiency	P_{out} = max rated load	54%	57%	—	59%	62%	—	64%	67%	—	69%	72%	—
Line regulation	P_{out} = max rated load $V_{in\,min} - V_{in\,max}$	—	10mV	30mV	—	10mV	30mV	—	10mV	30mV	—	10mV	50mV
Load regulation	P_{out} = 10% to F.L.	—	10mV	30mV	—	10mV	30mV	—	10mV	30mV	—	10mV	50mV
Output ripple	F.L. BW 2 MHz mV_{pp}	—	25	50	—	30	60	—	30	65	—	40	85

SINGLE OUTPUT DEVICES		16080-S05.2 (5W)			16080-S12 (5W)			163080-S15(5W)			16080-S28 (5W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+5.1	+5.2	+5.3	+11.9	+12.0	+12.1	+14.9	+15.0	+15.1	+27.8	+28.0	+28.2
Output current	$V_{in\,min} - V_{in\,max}$	—	—	961mA	—	—	416mA	—	—	333mA	—	—	178mA
Efficiency	P_{out} = max rated load	69%	72%	—	76%	80%	—	77%	81%	—	76%	80%	—
Line regulation	P_{out} = max rated load $V_{in\,min} - V_{in\,max}$	—	10mV	50mV	—	20mV	100mV	—	25mV	125mV	—	50mV	250mV
Load regulation	P_{out} = 10% to F.L.	—	10mV	50mV	—	20mV	100mV	—	25mV	125mV	—	50mV	250mV
Output ripple	F.L. BW 2 MHz mV_{pp}	—	40	85	—	60	150	—	75	180	—	150	350

Model No.		Case Style	Pin Count	Mounting
16080		1	18	Solder Sealed Flangeless PCB Mount
16080	TF	15	18	Seam Weld Chassis Mount with Flange

Case Dimensions

Units: inches | millimeters

TOLERANCES: ALL DIMENSIONS ±0.01 EXCEPT F= MAX. C = +0.01/-0.02; **DRAWINGS IN INCHES.**

Case Style		A	B	C	D	E	F	G
1		1.080 | 27.432	1.080 | 27.432	0.380 | 9.625	0.800 | 20.320	0.800 | 20.320	— | —	— | —
15	TF	1.160 | 29.464	1.283 | 32.588	0.380 | 9.625	— | —	0.800 | 20.320	1.754 | 44.552	1.460 | 37.084

Modular Devices, Inc. • One Roned Road • Shirley, New York 11967
www.mdipower.com • Fax 631.345.3106 • **Tel 631.345.3100**

Released 2015-09-04

Series 16080

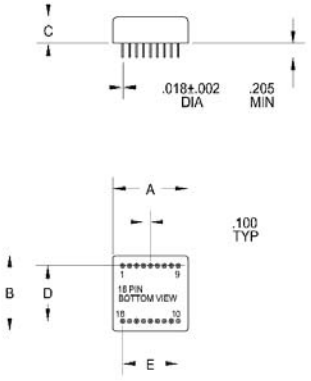
DC – DC Converters INDUSTRIAL GRADE

DUAL OUTPUT DEVICES		16080-D05 (5W)			16080-D12 (5W)			16080-D15 (5W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+4.9 -4.9	+5.0 -5.0	+5.1 -5.1	+11.9 -11.9	+12.0 -12.0	+12.1 -12.1	+14.9 -14.9	+15.0 -15.0	+15.1 -15.1
Output current*	$V_{in\,min} - V_{in\,max}$	±35mA	—	±500mA	±15mA	—	±208mA	±12mA	—	±166mA
Efficiency	P_{out} = max rated load	71%	74%	—	76%	80%	—	77%	81%	—
Line regulation	P_{out} = max rated load $V_{in\,min} - V_{in\,max}$	—	±10mV	±50mV	—	±20mV	±100mV	—	±25mV	±125mV
Load regulation†	P_{out} = 10% to F.L.	—	±10mV	±50mV	—	±20mV	±100mV	—	±25mV	±125mV
Output ripple	F.L. BW 2 MHz mV_{pp}	—	40	85	—	60	150	—	75	180

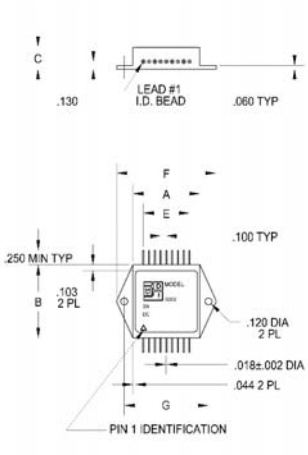
Notes: *Up to 90% full power available from either output if rated output power is not exceeded; †balanced load conditions.

24 Volts DC Input

CASE STYLE 1
Solder Sealed Flangeless PCB Mount



CASE STYLE 15
Seam Welded Chassis Mount with Flange



16080-SXX output < 24 VDC				16080-SXX output ≥ 24 VDC				16080-DXX			
Pin 1	+ Input	Pin 10	N/C	Pin 1	+ Input	Pin 10	N/C	Pin 1	+ Input	Pin 10	N/C
Pin 2	+ Input	Pin 11	N/C	Pin 2	+ Input	Pin 11	N/C	Pin 2	+ Input	Pin 11	N/C
Pin 3	N/C	Pin 12	N/C	Pin 3	N/C	Pin 12	N/C	Pin 3	N/C	Pin 12	N/C
Pin 4	Case	Pin 13	N/C	Pin 4	Case	Pin 13	N/C	Pin 4	Case	Pin 13	N/C
Pin 5	N/C	Pin 14	N/C	Pin 5	Main Out Ret	Pin 14	N/C	Pin 5	- Dual Output	Pin 14	N/C
Pin 6	Main Out Ret	Pin 15	Inhibit Not	Pin 6	N/C	Pin 15	Inhibit Not	Pin 6	Output Com	Pin 15	Inhibit Not
Pin 7	Main Out Ret	Pin 16	N/C	Pin 7	N/C	Pin 16	N/C	Pin 7	Output Com	Pin 16	N/C
Pin 8	N/C	Pin 17	Input Ret	Pin 8	Main Output	Pin 17	Input Ret	Pin 8	+ Dual Output	Pin 17	Input Ret
Pin 9	Main Output	Pi 18	Input Ret	Pin 9	N/C	Pin 18	Input Ret	Pin 9	N/C	Pin 18	Input Ret

Modular Devices, Inc. • One Roned Road • Shirley, New York 11967
www.mdipower.com • Fax 631.345.3106 • **Tel 631.345.3100**

Released 2015-09-04