3.25–5 Watt Hybrid

Features

- Completely self contained Thick Film Hybrid DC-DC Converter
- For MIL-STD-704 applications
- Built-in EMI input filter meets MIL-STD-461C requirements CE01, CE03, CS01, CS02 and CS06
- "Inhibit-not" function
- Short circuit protection
- Fully isolated, input to output
- Single, double or triple outputs
- 200 kHz operation for low ripple and fast response time
- No external filter caps required
- Full hermetic package

Specifications

INPUT: 28 VDC nominal
Range: 16 to 50 VDC continuous
18 to 50 VDC full power
Survives 80 V transients/MIL-STD-704A
ISOLATION:
Input to case: 500 VDC
Input to output: 500 VDC
Output to case: 100 VDC
ENVIRONMENT:
Storage temperature: -55°C to +150°C
Shock: 50 G's
Acceleration: 500 G's
Vibration: 30 G's
Grade M:
Full Power Output at T_{case} = +85°C
Linearly derates to zero at T_{case} = +115°C
Grade E:
Full Power Output at T_{case} = +125°C
Linearly derates to zero at T_{case} = +135°C
WEIGHT: 20 grams typical

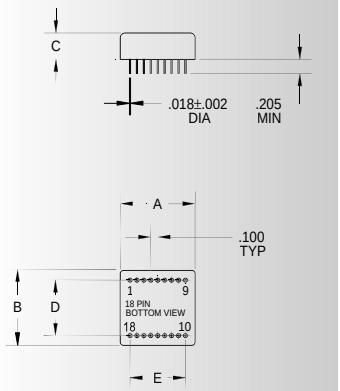
SINGLE OUTPUT DEVICES		3080-S02 (2W)			3080-S02.5 (2.5W)			3080-S03.3 (3.3W)			3080-S05 (5W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+1.9	+2.0	+2.1	+2.4	+2.5	+2.6	+3.2	+3.3	+3.4	+4.9	+5.0	+5.1
Output current	$V_{in\ min}$ — $V_{in\ max}$	—	—	1A	—	—	1A	—	—	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		3080-S05.2 (5W)			3080-S12 (5W)			3080-S15 (5W)			3080-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	1250mV	—	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
3080	1	18	Solder Sealed Flangeless PCB Mount

9006

CASE STYLE 1



Case Dimensions

Units: inches | millimeters

Case Style	A	B	C	D	E	F	G
1	1.080 | 27.432	1.080 | 27.432	0.380 | 9.652	0.800 | 20.320	0.800 | 20.320	— | —	— | —

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

DUAL OUTPUT DEVICES		3080-D05 (5W)			3080-D12 (5W)			3080-D15 (5W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	$+I_{out} = -I_{out}$	+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.*

28 VDC

TRIPLE OUTPUT DEVICES		3080-T05 (3.25W)			3080-T12 (3.7W)			3080-T15 (3.7W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	$+I_{out} = -I_{out}$	+4.9 +4.9 -4.9	+5.0 +5.0 -5.0	+5.1 +5.1 -5.1	+4.9 +11.5 -11.5	+5.0 +12.0 -12.0	+5.1 +12.5 -12.5	+4.9 +14.5 -14.5	+5.0 +15.0 -15.0	+5.1 +15.5 -15.5
Output current	$V_{in\ min}$ — $V_{in\ max}$	100mA ±10mA	— —	500mA ±75mA	100mA ±5mA	— —	500mA ±50mA	100mA ±5mA	— —	500mA ±40mA
Efficiency	P_{out} = max rated load	64%	67%	—	69%	72%	—	69%	72%	—
Line regulation	P_{out} = max rated load $V_{in\ min}$ — $V_{in\ max}$	— —	10mV 25mV	50mV 50mV	— —	10mV 25mV	50mV 50mV	— —	10mV 25mV	50mV 50mV
Load regulation	P_{out} = 10% to F.L.	— —	10mV 25mV	50mV 50mV	— —	10mV 25mV	50mV 50mV	— —	10mV 25mV	50mV 50mV
Output ripple	F.L. BW 2 MHz mV_{pp}	— —	40 —	85 50	— —	40 —	85 50	— —	40 —	85 50

3080-SXX output <24 VDC				3080-SXX output ≥24 VDC				3080-DXX				3080-TXX			
Pin 1	+ input	Pin 10	N/C	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 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 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 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 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 6	dual output ret	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 7	dual output ret	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 8	+ dual output	Pin 17	input ret
Pin 9	main output	Pin 18	input ret	Pin 9	N/C	Pin 18	input ret	Pin 9	N/C	Pin 18	input ret	Pin 9	main output	Pin 18	input ret

Please specify **GRADE LEVEL** for your application. Industrial grade units will be shipped if no option is specified.

M +85°C military
E +125°C military