UP TO 20 WATTS - DC SERIES
SURFACE MOUNT CONVERTER



FEATURES:

- Output trim function
- Overvoltage protection
- High efficiency (to 88%)
- Six sided shield
- Undervoltage lockout
- Remote On/Off
- Short-circuit protection
- UL/CUL 1950, file #E155800

THE DC SERIES FROM WALL INDUSTRIES

The DC surface mount series offers the user a wide input range and single output with tight regulation. These converters are highly reliable and well suited for telecom applications.

SPECIFICATIONS: DC SERIES

All specifications apply at 25° C ambient unless otherwise noted.

INPUT SPECIFICATIONS

Input Voltage Range	48V Nominal input	36-75VDC
Input Voltage Lockout	DC-DC On	36VDC
	DC-DC Off	33VDC
Input Filter (Note 1)		L-C type
Input Voltage Variation	dv/dt	5V/ms, max
		(complies with ETS300 132 part 4.4)
Input Surge Voltage	48V Input (100mS max)	100VDC
Input Reflected Ripple (Note 2)		25mAp-p
		(nominal Vin at full load)
Start Up Time	nom. Vin & const. res. load	25mS
Remote On/Off (Note 3)	DC-DC On	Open or 3.5V<Vr<12V
	DC-DC Off	Short or 0V<Vr<1.2V
Remote off input current	nominal Vin	2.5mA

OUTPUT SPECIFICATIONS

Output Power		20 Watts, max
Voltage accuracy	full load and nominal Vin	±1%
Voltage adjustability		±10%
Minimum load		0%
Line regulation	LL to HL at Full Load	±0.2%
Load regulation	10% to 100% FL	±0.5%
Ripple and noise (Note 4)	2, 3.3V: 50mV, 75mVp-p	
Temperature Coefficient		±0.02%/ ºC, max
Transient resp rec time	(25% load step change)	300uS
Over voltage protection	2.0 & 3.3V output	3.9V
(Zener diode clamp)	5V output	6.2V
	12V output	15V
	15V output	18V
Over load protection	% of FL at nom out	150% max
Short circuit protection		Hiccup, automatic recovery

GENERAL SPECIFICATIONS

Efficiency (nominal input and full load)	see table
Isolation voltage	1600VDC, min
Isolation resistance	10^9ohms, min
Isolation capacitance	500pF, max
Switching frequency	300KHz, typ
Approvals & standards	IEC60950,UL1950,EN60950
Potting material	Epoxy (UL94-V0)
Dimensions	1.95 x 1.19 x 0.38 Inch
Weight	32.5g (1.15 oz)
MTFB (Note 5)	1.632 x 10^6 hrs

ENVIRONMENTAL SPECIFICATIONS

Operating temp. range	-40ºC ~ +85ºC(w/ derating)
Maximum case temp.	+100ºC
Storage temp. range	-55ºC ~ +105ºC
Thermal impedence (natural convection)	14ºC/Watt
Thermal shock	MIL-STD-810D
Vibration	10~55Hz, 2G, 30 minutes along X,Y and Z
Relative humidity	5% to 95% RH

EMC CHARACTERISTICS

Conducted emissions	EN55022	Level A
Radiated emissions	EN55022	Level A
ESD	EN61000-4-2	Perf. Criteria2
Radiated immunity	EN61000-4-3	Perf. Criteria2
Fast transient	EN61000-4-4	Perf. Criteria2
Surge	EN61000-4-5	Perf. Criteria2
Conducted immunity	EN61000-4-6	Perf. Criteria2

Due to advances in technology, specifications subject to change without notice.

3/18/04

Input Voltage (VDC)	Output Voltage (VDC)	Output Current (A)	Model Number	Efficiency (%)
36-75	2.0	4	DC48S2.0-8	82
	3.3	4	DC48S3.3-13	84
	5	4	DC48S5-20	88
	12	1.67	DC48S12-20	88
	15	1.33	DC48S15-20	87

PIN CONNECTIONS

1	+Vout
2	-Vout
3	N/C (Note 7)
4	Trim
5	N/C (Note 7)
6	N/C (Note 7)
7	N/C (Note 7)
8	Remote On/Off
9	Sync
10	N/C (Note 7)
11	-Vin
12	+Vin

NOTES:

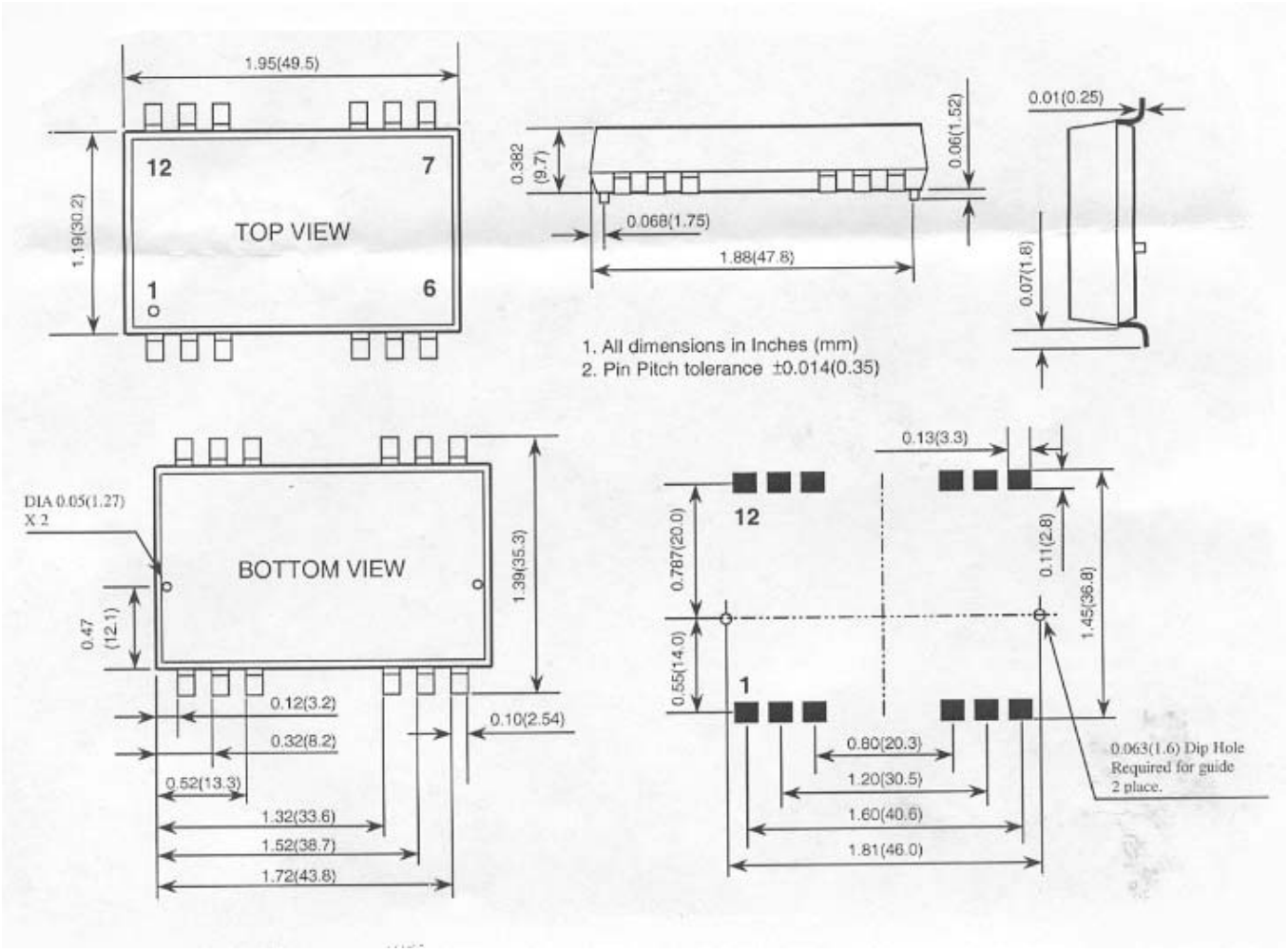
1. An external filter capacitor is required for normal operation. The capacitor should be capable of handling 1A ripple current. We suggest: Nippon chemicon KMF series, 220µF/100V, ESR 90Mohm
2. Simulated source impedance of 12µH. 12µH inductor in series with +Vin.
3. Remote On/Off is referenced to the negative input (-Vin).
4. Measured with 104pF/50V MLCC. Test conditions: nominal input and full load.
5. BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40ºC. (Ground fixed and controlled environment).
6. We recommend solder paste volume of 2.8 cubic mm (170,000 cubic mills/pin).
7. N/C pins may be used internally by the module and should not be connected by the customer.

Due to advances in technology, specifications subject to change without notice.

3/18/04

OUTLINE DIAGRAM

Dimensions are in inches and (millimeters).
Tolerances: x.x ±0.02 in. (0.5 mm) - x.xx ±0.015 in. (0.4 mm)



3/18/04