

30 WATT AC-DC CONVERTER

BNT/ BNTE-SA Series

Specifications<AC/DC>	Model						
BNT**SA-U/BNTE**SA 30WATTS/SINGLE	BNT3.3SA-U BNTE3.3SA	BNT05SA-U BNTE05SA	BNT12SA-U BNTE12SA	BNT15SA-U BNTE15SA	BNT24SA-U BNTE24SA	BNT36SA-U BNTE36SA	BNT48SA-U BNTE48SA
Input Characteristic							
Input Voltage	AC100-115V						
Input Current	0.7A						
Input Range	AC85-132V(DC110-175V)						
Input Frequency	50/60Hz						
Input Frequency Range	47-440Hz						
Phase	Single						
Inrush Current *1	25A(typical) at AC100V						
Efficiency [%] (typical) *2	70	77	80	82	84	84	85

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Output Characteristic							
Output Voltage [V]	3.3	5	12	15	24	36	48
Output Current [A]	6.0	6.0	2.5	2.0	1.3	0.9	0.7
Voltage Adjust Range	+/- 10% of Rated Output Voltage(at no load within the input range)						
Ripple and Noise [mVp-p](max) 0 to +60C *3	120	120	150	150	150	250	350
	160	160	180	180	180	300	400
Regulation							
a. Statistic Line Regulation [mV](maximum)	26	40	96	120	192	288	384
b. Statistic Load Regulation [mV](maximum)	30	45	108	135	216	324	432
c. Temperature Coefficient *4	0.03%/C						
d. Drift[mV](maximum) *5	32	40	75	90	135	195	255
e. Dynamic Load Regulation [mV](typical) *6	not specified						
f. Recovery Time *6	not specified						
Rise up time	200mS(maximum) at 25C and rated input/output						
Hold up time	20mS(typical) at 25C and rated input/output						
Functions							
Overcurrent Protection *7 = or >105% of Rated Output	Current Limiting with automatic recovery						
	6.3	6.3	2.6	2.1	1.4	0.95	0.74
Overvoltage Protection = or >115% of Rated Output Voltage[V]	Zener diode clamping						
	3.8	5.75	13.8	17.3	27.6	41.4	55.2
Remote Sense	not available						
Remote On/Off	not available						
Environmental							
Operating Temperature	-10 to +50C						
Operating Humidity	20 to 90%RH(non-condensing)						
Storage Temperature	-20 to +75C						
Storage Humidity	20 to 90%RH(non-condensing)						
Withstanding Voltage	Primary-Secondary AC2,000V for 1minute Primary-Frame Ground AC2,000V for 1minute Secondary-Frame Ground AC500V for 1minute						
Isolation Resistance	Primary-Secondary-Frame Ground 50MOhm(minimum) by DC500V insulation tester						
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s ² ,20minutes' period for 60minutes each along X,Y,Z axes (non-operating)						
Shock	196m/s ²						
Cooling	Convection						
Leakage Current	0.5mA(maximum) at 25C,rated input/output and rated input frequency						
Line Conducted Noise	Built to meet FCC Part15-B Class B Built to meet VCCI Class B						
Safety	UL: UL1950(Except BNTE) C-UL: CSA C22.2 No.950(Except BNTE)						
Weight (typical)	open board type:140g						
MTBF [H]	500,000						
Switching Frequency[kHz](typical) *8	53	51	60	60	60	60	54

Conditions:

*1at cold start

*2 at DC130V input and rated output

*3 measured by a bayonet probe at the end of a pair of 15cm-long wires terminated with a 100uF electrolytic capacitor and a 0.1uF film capacitor in parallel at a 0 to 20MHz bandwidth

*4 at -10 to +50°C

*5 for 7hour period after 1hour warm-up at 25°Cand rated input/output

*6 when output current changed from 25% of rated output current to 75% rapidly at AC100V input

*7 for less than 1minute of overcurrent and short circuit

*8 variable on input voltage and load conditions