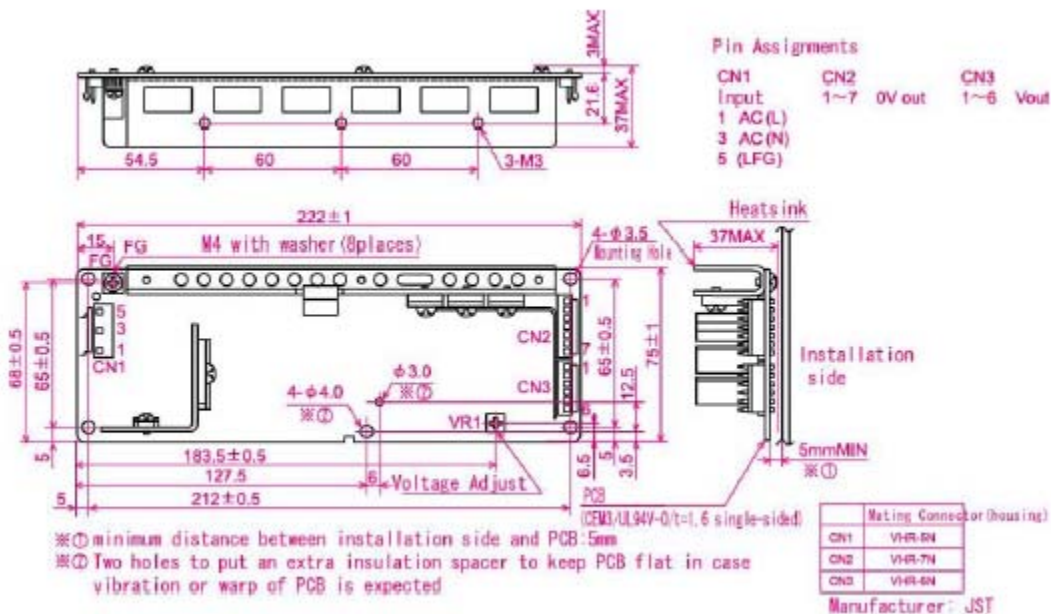


# 150 WATT AC-DC CONVERTER

## BSE-SA Series

Specifications<A>	Model									
<b>BSE**SA-U</b> <b>150WATTS/ SINGLE</b>	BSE3.3SA-U	BSE05SA-U	BSE06SA-U	BSE09SA-U	BSE12SA-U	BSE15SA-U	BSE24SA-U	BSE30SA-U	BSE36SA-U	BSE48SA-U
<b>Input Characteristic</b>										
Input Voltage	AC115V									
Input Current	3A									
Input Range	AC85-132V									
Input Frequency	50/60Hz									
Input Frequency Range	47-440Hz									
Phase	Single									
Inrush Current *1	17A(maximum) at AC115V									
Efficiency [%] (typical) *2	77	82	83	85	85	87	88	88	88	89

### DIMENSION DIAGRAM



Specifications<AC/DC>	Model									
BSE**SA-U 150WATTS/SINGLE	BSE3.3SA-U	BSE05SA-U	BSE06SA-U	BSE09SA-U	BSE12SA-U	BSE15SA-U	BSE24SA-U	BSE30SA-U	BSE36SA-U	BSE48SA-U
<b>Input Characteristic</b>										
Input Voltage	AC115V									
Input Current	3A									
Input Range	AC85-132V									
Input Frequency	50/60Hz									
Input Frequency Range	47-440Hz									
Phase	Single									
Inrush Current *1	17A(maximum) at AC115V									
Efficiency [%] (typical) *2	77	82	83	85	85	87	88	88	88	89
<b>Output Characteristic</b>										
Output Voltage [V]	3.3	5	6	9	12	15	24	30	36	48
Output Current [A]	30	30	25	17	14	11	7	5.5	4.6	3.5
Voltage Adjust Range	2.7-3.63 +/-10% of Rated Output Voltage(at no load within the input range)									
Ripple and Noise [mVp-p](maximum) *3	150	150	160	190	220	250	340	400	460	580
<b>Regulation</b>										
a.Statistic Line Regulation [mV](maximum)	26.4	40	48	72	96	120	192	240	288	384
b.Statistic Load Regulation [mV](maximum)	29.7	45	54	81	108	135	216	270	324	432
c.Temperature Coefficient *4	0.025%/°C 0.03%/°C									
d.Drift[mV](maximum) *5	31.5	40	45	60	75	90	135	165	195	255
e.Dynamic Load Regulation [mV](typical) *6	99	150	180	270	360	450	720	900	1080	1440
f.Recovery Time *6	0.5mS(typical)									
Rise up time	500mS(maximum) at 25°Cand rated input/output									
Hold up time	15mS (minimum) at 25°Cand rated input/output									
<b>Functions</b>										
Overcurrent Protection @03% of Rated Output Current(A)	Current Limiting with automatic recovery									
	30.9	30.9	25.8	17.5	14.4	11.3	7.21	5.67	4.74	3.61
Overvoltage Protection @14% of Rated Output Voltage(V)	Output shutdown(to reset,leave 1minute after shut-off)									
	3.76	5.70	6.84	10.3	13.7	17.1	27.4	34.2	41.0	54.7
Remote Sense	not available									
Remote On/Off	not available									
<b>Environmental</b>										
Operating Temperature	Convection:-10 to +40°CForced air:-10 to +60°C									
Operating Humidity	30 to 85% RH(non-condensing)									
Storage Temperature	-20 to +85°C									
Storage Humidity	10 to 85% RH(non-condensing)									
Withstanding Voltage	Primary-Secondary AC1500V for 1minute Primary-Frame Ground AC1500V for 1minute Secondary-Frame Ground AC500V for 1minute									
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester									
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s <sup>2</sup> ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)									
Shock	294m/s <sup>2</sup>									
Cooling	Convection									
? Leakage Current	1mA(maximum) at 25°Crated 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 C-UL: CSA C22.2 No.950									
? Weight (typical)	open board type:450g									
? MTBF [H]	550,000									
? Switching Frequency[kHz](typical)	130									

Conditions:

\*1at cold start

\*2 at DC130V input/rated output

\*3 measured by a bayonet probe at the end of a pair of 5cm long wires terminated with a 100uF electrolytic capacitor and 0.1uF film capacitor in parallel at a 0 to 100MHz bandwidth

\*4 Convection:at -10 to +40°CForced air:at -10 to +60°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



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