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PORTWELL INC
 MR C CHEN
 3RD FL
 88 NEI-HU RD, SEC 1
 TAIPEI TAIWAN

RE: Project Number(s) - 02RS57749

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QQGQ2 August 28, 2002
Power Supplies, Information Technology Equipment Including Electrical Business Equipment - Component

PORTWELL INC **E203292**
3RD FL 88 NEI-HU RD, SEC 1, TAIPEI TAIWAN

Model No.	Rated Input		SC	Output			OC	SP	EP	FC	GC
	V	Hz		Max V	Max A	Max VA					
Orion-200-XX, (where X may be any alphanumeric character)	115/230	47-63	0	5.15	62.0	185.0	3	1950	20B	0	1
				12.26	25.6	229.4					
				3.14	40.0	77.0					
				-5.10	10.2	18.0					
				-12.90	8.0	33.0					
Orion-250S, Orion-300S, Orion-400S	115/230	60/50	0	6.3	45.0	193	3	950	20B	0	1
				3.36	60.0	107					
				3.36	60.0	107					
Orion-2003-XX, (where X may be any alphanumeric character)	115/230	47-63	0	5.1	132.0	320	3	1950	20B	0 or 2,6	1
				13.1	75.0	621					
				3.4	90.0	104					
				5.3	12.0	44					
				13.2	10.0	48					
Orion-2004-XX, (where X may be any alphanumeric character)	115/230	47-63	0	5.1	2.9	14	3	1950	20B	0	1
				5.22	177.0	559.0					
				12.91	85.0	825.0					
				3.43	103.0	134.0					
				-5.23	15.0	24.5					
Orion 300X				-12.71	12.0	52.5					
				5.39	3.0	12.9					
				+12.8	19.2	225					
				+3.33	14.8	71					
				-5.01	1.2	5.5					
Orion 150A	115/230	50/60	0	-12.04	1.5	18					
				+5.1sb	2.6	13					
Orion 150A	115/230	50/60	0	5.18	34.6	138	3	1950	20B	0	1

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Model No.	Rated Input		SC	Output			OC	SP	EP	FC	GC
	V	Hz		Max V	Max A	Max VA					
Orion 150AX				13.9	18	203					
				3.3	10	30					
				-4.98	1.6	7.5					
				-12.8	19	124					
				5.14	2.9	13					
ORION-450AX PW-450ATXA	115/230	60/50	0	3.3	28	450 W					
				5	40						
				-5	0.5						
				12	17						
				-12	1.5						
				5 Vsb	1.5						
ORION-450A PW-450APSC				3.3	—	450 W					
				5	43						
				-5	0.5						
				12	18						
				-12	1.5						
				5 Vsb	—						
PW-450APSC				3.3	—	450 W					
				5	43						
				-5	—						
				12	18						
				-12	—						
				5 Vsb	—						
ORION-400AX PW-400ATXA				3.3	22	400 W					
				5	40						
				-5	0.5						
				12	15						
				-12	1.5						
				5 Vsb	1.5						
ORION-400A PW-400APSC				3.3	—	400 W					
				5	38						
				-5	0.5						
				12	16						
				-12	1.5						
				5 Vsb	—						
ORION-400A PW-400APSC				3.3	—	400 W					
				5	38						
				-5	—						
				12	16						
				-12	—						
				5 Vsb	—						
ORION-330AX or ORION-330SX PW-330AATXA				3.3	15	330 W					
				5	30						
				-5	0.5						
				12	15						
				-12	1.0						
				5 Vsb	1.5						
ORION-330A PW-330APSC				3.3	—	330 W					
				5	30						
				-5	0.5						
				12	14						
				-12	1.0						
				5 Vsb	—						
ORION-330A PW-330APSC				3.3	—	330 W					
				5	30						
				-5	—						
				12	14						
				-12	—						
				5 Vsb	—						
PW-300Y				3.3	15	300 W					
				5	30						
				-5	0.5						

Model No.	Rated Input		SC	Output			OC	SP	EP	FC	GC
	V	Hz		Max V	Max A	Max VA					
ORION-250AX PW-250Y				12	12	250 W					
				-12	1.0						
				5 Vsb	1.5						
				3.3	15						
				5	25						
				-5	0.5						
ORION-230AX PW-230Y				12	10	230 W					
				-12	1.0						
				5 Vsb	1.5						
				3.3	15						
				5	23						
				-5	0.5						
ORION-200AX PW-200Y				12	9	200 W					
				-12	1.0						
				5 Vsb	1.5						
				3.3	15						
				5	20						
				-5	0.5						
ORION-150AX PW-150Y				12	8	150 W					
				-12	1.0						
				5 Vsb	1.5						
				3.3	15						
				5	15						
				-5	0.5						
(All models output +3.3 V, 5 V sb, -12 V, -5 V can be optional)											
ORION-3002XX	115/ 230	50/ 60	0	+5*	36	—	3	1950	20B	0	0
				+12*	14	—					
				-5*	0.5	—					
				-12*	1	—					
ORION-301XXX	115/230	50/60	0	+5*	36	—	3	1950	20B	0	0
				+12*	14	—					
				-5*	0.5	—					
				-12*	1	—					
ORION-200A@	115/230	60/50	0	+3.3*	16	—	3	1950	20B	0	1
				3.3	15	200					
				5	20	200					
				-5	0.5	200					
				12	8.0	200					
				-12	1.0	200					
ORION-200AX@	115/230	60/50	0	5Vsb	1.5	200	3	1950	20B	0	1
				3.3	15	200					
				5	20	200					
				-5	0.5	200					
				12	8.0	200					
				-12	1.0	200					
ORION-230A@	115/230	60/50	0	5Vsb	1.5	200	3	1950	20B	0	1
				3.3	15	230					
				5	23	230					
				-5	0.5	230					
				12	9.0	230					
				-12	1.0	230					
ORION-230AX@	115/230	60/50	0	5Vsb	1.5	230	3	1950	20B	0	1
				3.3	15	230					
				5	23	230					
				-5	0.5	230					
				12	9.0	230					
				-12	1.0	230					

Model No.	Rated Input		SC	Output			OC	SP	EP	FC	GC
	V	Hz		Max V	Max A	Max VA					
ORION-250A@	115/230	60/50	0	3.3	15	250	3	1950	20B	0	1
				5	25	250					
				-5	0.5	250					
				12	10	250					
				-12	1.0	250					
				5Vsb	1.5	250					
ORION-250AX@	115/230	60/50	0	5.36	54.14	173.85	3	1950	20B	0	1
				5.19	2.92	12.97					
				3.41	41.26	80.51					
				13.16	24.23	213.83					
				5.97	6.38	21.54					
				13.78	6.10	55.06					
ORION-300A@	115/230	60/50	0	3.3	15	300	3	1950	20B	0	1
				5	30	300					
				-5	0.5	300					
				12	12	300					
				-12	1.0	300					
				5Vsb	1.5	300					
ORION-300AX@	115/230	60/50	0	3.3	15	300	3	1950	20B	0	1
				5	30	300					
				-5	0.5	300					
				12	12	300					
				-12	1.0	300					
				5Vsb	1.5	300					
ORION-330A@	115/230	60/50	0	3.3	—	330	3	1950	20B	0	1
				5	30	330					
				-5	0.5	330					
				12	14	330					
				-12	1	330					
				5Vsb	—	330					
ORION-330AX@	115/230	60/50	0	5.19	3.12	14.79	3	1950	20B	0	1
				5.45	65.57	205.23					
				3.42	38.54	84.73					
				13.25	38.99	336.3					
				6.15	7.00	23.67					
				14.56	8.24	70.49					
ORION-400A@	115/230	60/50	0	3.3	—	400	3	1950	20B	0	1
				5	38	400					
				-5	0.5	400					
				12	16	400					
				-12	1.5	400					
				5Vsb	—	400					
ORION-400AX@	115/230	60/50	0	3.3	22	400	3	1950	20B	0	1
				5	40	400					
				-5	0.5	400					
				12	15	400					
				-12	1.5	400					
				5Vsb	1.5	400					
ORION-450A@	115/230	60/50	0	3.3	—	450	3	1950	20B	0	1
				5	43	450					
				-5	0.5	450					
				12	18	450					
				-12	1.5	450					
				5Vsb	—	450					
ORION-450AX@	115/230	60/50	0	5.11	65.44	250.43	3	1950	20B	0	1
				5.41	2.93	13.43					
				12.35	27.61	298.12					
				3.62	51.63	110.52					
				5.19	1.50	6.82					
				12.36	8.33	68.93					
ORION-2302	115/230	60/50	0	+5*	25*	—	3	1950	20B	0	1
ORION-2253	115/230	60/50	0	+5.4	140	525	3	1950	20B	0	1

Model No.	Rated Input		SC	Output			OC	SP	EP	FC	GC
	V	Hz		Max V	Max A	Max VA					
ORION-2502/2U	115/230	60/50	0	+5*	30*	—	3	1950	20B	0	1
ORION-3001FYXX	100-127/ 200-240	50/60	0	+5.03	40	201	33	1950	20B	0	1
				+12.08	18	215					
				+3.35	37	104					
			-12.29	1.5	16						
				-5.12	1.6	6					
				+5.11Vsb	3.6	16					
ORION-A1501-XX	100-240	47-63	3	5	14	150	3	1950	20B	0	1
				3.3	10	—					
				12	6	—					
				-5	0.5	—					
				-12	0.8	—					
				5sb	1.5	—					
Orion-A4001XXX	100-240	47-63	0	@5.0	@35	—	3	60950	20B	2.6	1
X= A-Z incl., 0-9 incl. or blank				@12.0	@14	—					
				@12.0	@14	—					
				@3.3	@28	—					
				@-5.0	@0.5	—					
				@-12.0	@0.8	—					
				@5Vsb	@2.0	—					
ORION-D4601-XX	100-240	47-63	0	@5	@40-35	—	3	60950	20B	0	1
				@12	@27-20	—					
				@-5	@0.8	—					
				@-12	@1	—					
				@3.3(\$)	@30-28	—					
				@5Vsb	@2	—					
ORION-F4002XXX	100/ 240	47/63	—	5.2	120	520	3	1950	20B	0	1
where X can be				11.9	35	402					
0 to 9 incl. or blank				3.4	88	237					
				5.2	4.4	17					
				12.2	4.4	49					
				5.1	4.5	19					
ORION-F30020-xx	100-200	47-63	0	4.99	73.7	305.9	3	1950	20B	0	0
				11.9	26.2	302.87				or	
				3.33	54.5	125.5				2.3	
				-4.51	1.19	1.47				or	
				-11.87	2.22	14.3				2.6	
				5.25	6.7	27.47					

Marking: Company name or "E203292" and model designation.

See General Information Preceding These Recognitions

For use only in equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.