

Tubular OPzS Range Brochure

BATTERY SOLUTIONS



*Energy storage for
safe power supply*

EverExceed[®]
power your applications

Tubular OPzS

Range



Specifications:

- Very high operational reliability under rough operating conditions
- Low maintenance due to reduced antimony in the alloy and high electrolyte reserve
- Nominal capacity 50–3350 Ah C10
- 20 years at 20°C (80% remaining capacity from C10)
- Also designed for cyclic applications
- Also available in dry charged condition with separate electrolyte
- Low gassing due to PbSb1.6SnSe alloy (EN 50272-2)
- Conforms to DIN 40 736 and DIN 40 737 T3
- Electrolyte: diluted sulphuric acid $d_N = 1.24 \text{ kg/l}$
- Optimized plate design produces increased capacities compared to DIN
- Completely recyclable

Technical Features

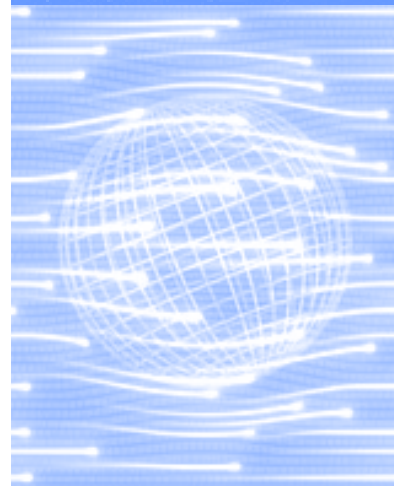
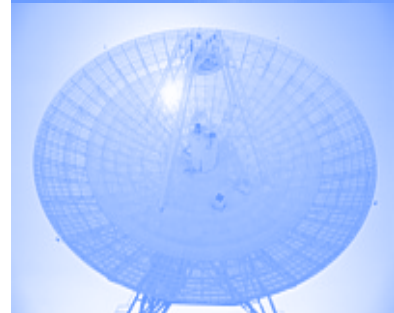
- Tubular positive plates:** Robust tubular plates consisting of a lead calcium antimony alloy, optimized for high corrosion resistances
- Pasted negative plates:** Grid plate construction consisting of low antimony with long-life expander material
- Separators:** Microporous and robust, for electrical separation of the positive and negative plates and optimized for low internal resistance
- Container:** high impact, transparent SAN (Styrol-Acryl-Nitril)
- Safety Vents:** cells incorporate flame retardant ceramic plugs that filter out any drops of electrolyte from the escaping gases preventing any errant spark or flame from entering the battery
- Poles:** Screw connection for easy and safe assembly and maintenance-free connection with excellent conductivity
- Post seals:** extremely high integrity post seal design to prevent electrolyte
- Connectors:** flexible, fully insulated cable connectors screwed to the terminal with an insulated screw having a probe hole on the top for electrical measurement

Standard and Compliance

- DIN 40736 part 1
- DIN 40737 part 2
- IEC 896 part 1

Applications

- Telecommunications
- Emergency lighting
- Microwave radio systems
- Power generation plants
- Photovoltaics



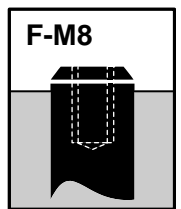
OPzS block Technical Characteristics and Data

Part number	DIN Type	Nom. Voltage (V)	C10 AH to 1.80VPC	Outline Dimensions (mm)				Weight With acid (kg)	Acid Weight (kg)	Pole Pairs	Internal Resist. mOhms	Short Circuit Current	Terminal
				Length (l)	Width (b/w)	Height (h)	Installed Length (B/L)						
12TS01050	12V 1 OPzS 50	12	59	275	208	385	285	35	15	1	18.1	690	F-M8
12TS02100	12V 2 OPzS 100	12	101	275	208	385	285	45	14	1	9.26	1320	F-M8
12TS03150	12V 3 OPzS 150	12	150	383	208	385	393	64	19	1	6.46	1900	F-M8
6TS04200	6V 4 OPzS 200	6	203	275	208	385	285	41	13	1	2.68	2300	F-M8
6TS05250	6V 5 OPzS 250	6	255	383	208	385	393	56	20	1	2.39	2800	F-M8
6TS06300	6V 6 OPzS 300	6	303	383	208	385	393	63	20	1	1.96	3150	F-M8

Acid density $d_N = 1.240 \text{ kg/l}$

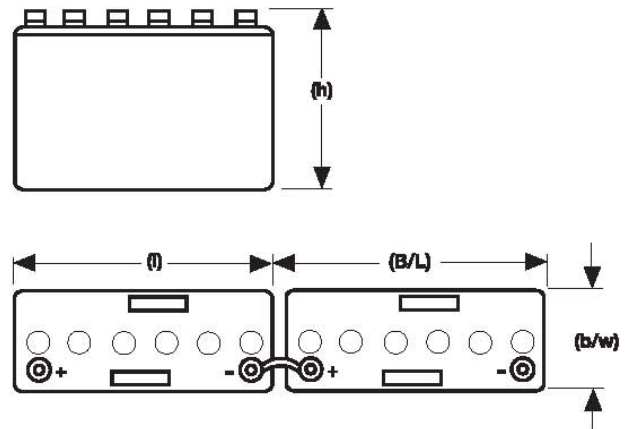
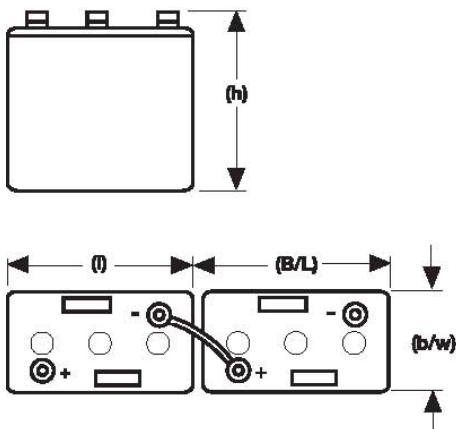
Container, terminal and torque

Container: ABS



20 Nm

Drawings with terminal position



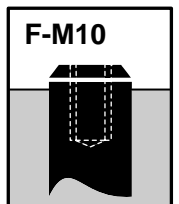
OPzS Cells Technical Characteristics and Data

Part No.	DIN Type	Nom. Voltage (V)	C10 AH to 1.80 VPC	Outline Dimensions (mm)				Weight With acid (kg)	acid Weight (kg)	Pole Pairs	Internal Resist. mOhms	Short Circuit Current	Terminal
				Length (l)	Width (b/w)	Height (h)	Installed Length (B/L)						
2TS040100	2 OPzS 100	2	128	105	208	405	115	13.7	5.2	1	1.40	1400	F-M10
2TS030150	3 OPzS 150	2	168	105	208	405	115	15.2	5.0	1	1.02	1950	F-M10
2TS040200	4 OPzS 200	2	214	105	208	405	115	16.6	4.6	1	0.83	2450	F-M10
2TS050250	5 OPzS 250	2	265	126	208	405	136	20.0	5.8	1	0.72	2850	F-M10
2TS060300	6 OPzS 300	2	316	147	208	405	157	23.3	6.9	1	0.63	3250	F-M10
2TS050350	5 OPzS 350	2	380	126	208	520	136	26.7	8.1	1	0.62	3250	F-M10
2TS060420	6 OPzS 420	2	455	147	208	520	157	31.0	9.3	1	0.56	3650	F-M10
2TS070490	7 OPzS 490	2	530	168	208	520	178	35.4	10.8	1	0.50	4100	F-M10
2TS060600	6 OPzS 600	2	680	147	208	695	157	43.9	13.0	1	0.47	4350	F-M10
2TS080800	8 OPzS 800	2	910	215	193	695	225	59.9	17.1	2	0.30	6800	F-M10
2TS101000	10 OPzS 1000	2	1140	215	235	695	225	73.2	21.7	2	0.26	7900	F-M10
2TS121200	12 OPzS 1200	2	1370	215	277	695	225	86.4	26.1	2	0.23	8900	F-M10
2TS121500	12 OPzS 1500	2	1700	215	277	845	225	108	33.7	2	0.22	8500	F-M10
2TS141750	14 OPzS 1750	2	1800	215	277	845	225	114	32.7	2	0.21	9300	F-M10
2TS151875	15 OPzS 1875	2	1930	215	277	845	225	125	35.0	2	0.20	9800	F-M10
2TS162000	16 OPzS 2000	2	2250	215	400	815	225	151	50.0	3	0.16	12800	F-M10
2TS182250	18 OPzS 2250	2	2450	215	490	815	225	158	48.0	4	0.12	14600	F-M10
2TS202500	20 OPzS 2500	2	2800	215	490	815	225	184	60.0	4	0.11	17000	F-M10
2TS243000	24 OPzS 3000	2	3350	215	580	815	225	242	63.0	4	0.10	18600	F-M10

Acid density $d_N = 1.240$ kg/l

Container, terminal and torque

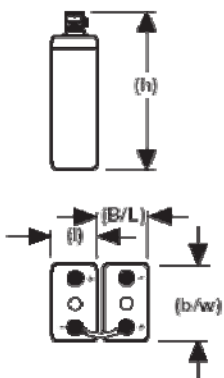
Container: SAN (acrylonitrile polystyrene),
UL 94 V-0 optional



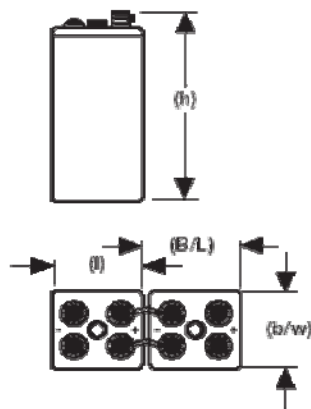
25 Nm

Drawings with terminal position

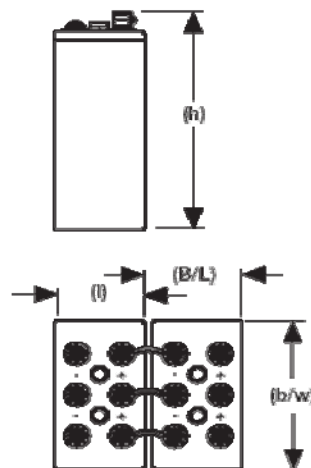
**2 OPzS 100
up to
6 OPzS 600**



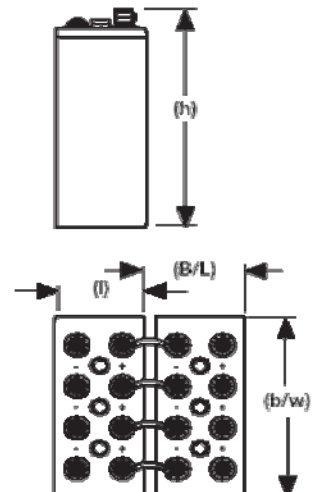
**8 OPzS 800
up to
15 OPzS 1875**



**16 OPzS 2000
up to
18 OPzS 2250**



**20 OPzS 2500
up to
24 OPzS 3000**



EverExceed Tubular OPzS block Discharge Data Amperes at 20°C to 1.90-1.80 VPC

Part Number	DIN Type	Discharge Data Amps @ 20° C to 1.90 VPC											
		Discharge Time in Minutes				Discharge Time in Hours							
		3	10	15	30	1	2	3	4	5	6	8	10
12TS01050	12V 1 OPzS 50	32.0	29.0	25.0	21.3	16.1	11.7	9.70	8.20	7.05	6.30	5.60	5.10
12TS02100	12V 2 OPzS 100	66.5	58.0	52.2	41.5	31.5	24.5	17.4	15.0	13.7	12.5	10.6	8.90
12TS03150	12V 3 OPzS 150	99.0	84.0	76.0	64.0	47.2	34.1	26.4	22.3	19.7	17.7	14.6	12.0
6TS04200	6V 4 OPzS 200	120	105	96.0	85.0	62.0	46.0	35.3	30.0	26.7	24.1	19.8	16.1
6TS05250	6V 5 OPzS 250	145	132	122	102	70.0	56.0	43.5	34.0	32.0	29.0	25.2	21.7
6TS06300	6V 6 OPzS 300	160	147	136	118	91.0	66.0	53.0	45.3	39.0	34.0	28.0	24.5

Part Number	DIN Type	Discharge Data Amps @ 20° C to 1.87 VPC											
		Discharge Time in Minutes				Discharge Time in Hours							
		3	10	15	30	1	2	3	4	5	6	8	10
12TS01050	12V 1 OPzS 50	40.0	35.0	31.0	25.5	19.4	13.6	11.2	9.30	8.20	7.20	6.05	5.50
12TS02100	12V 2 OPzS 100	80.0	70.0	62.0	50.0	37.9	27.2	19.9	16.9	15.2	13.7	11.5	9.50
12TS03150	12V 3 OPzS 150	120	102	90.0	75.0	55.0	39.5	30.0	25.4	22.0	19.8	16.4	13.8
6TS04200	6V 4 OPzS 200	150	132	120	100	72.4	52.0	40.0	33.2	29.4	26.8	22.2	18.0
6TS05250	6V 5 OPzS 250	180	161	140	118	88.7	63.2	50.0	42.0	36.7	33.4	28.1	23.3
6TS06300	6V 6 OPzS 300	195	176	160	135	104	76.5	59.2	51.0	44.0	38.0	32.0	27.0

Part Number	DIN Type	Discharge Data Amps @ 20° C to 1.85 VPC											
		Discharge Time in Minutes				Discharge Time in Hours							
		3	10	15	30	1	2	3	4	5	6	8	10
12TS01050	12V 1 OPzS 50	44.0	39.0	35.0	28.2	21.0	14.2	11.7	9.8	8.50	7.50	6.30	5.60
12TS02100	12V 2 OPzS 100	87.5	78.0	69.5	55.0	41.0	28.8	21.4	17.8	15.6	14.3	11.8	9.70
12TS03150	12V 3 OPzS 150	130	112	103	81.0	59.8	42.0	31.5	27.1	23.0	20.7	17.1	14.2
6TS04200	6V 4 OPzS 200	162	145	135	110	78.7	55.5	42.2	35.0	30.8	28.1	23.3	18.7
6TS05250	6V 5 OPzS 250	193	175	155	126	93.4	67.0	52.5	44.5	38.2	35.1	29.3	23.7
6TS06300	6V 6 OPzS 300	216	195	177	147	114	79.0	62.0	54.0	46.0	40.5	33.7	28.0

Part Number	DIN Type	Discharge Data Amps @ 20° C to 1.83 VPC											
		Discharge Time in Minutes				Discharge Time in Hours							
		3	10	15	30	1	2	3	4	5	6	8	10
12TS01050	12V 1 OPzS 50	48.0	43.0	39.0	31.0	22.8	15.3	12.2	10.2	8.80	7.80	6.50	5.80
12TS02100	12V 2 OPzS 100	95.0	85.0	77.0	60.0	44.0	30.6	22.8	18.6	16.1	14.6	12.1	10.0
12TS03150	12V 3 OPzS 150	140	122	115	87.0	64.6	44.4	33.4	28.3	24.1	21.6	17.9	14.6
6TS04200	6V 4 OPzS 200	175	158	150	120	85.0	59.1	44.5	36.7	32.3	29.2	24.0	19.5
6TS05250	6V 5 OPzS 250	207	190	171	135	102	71.4	55.0	46.5	40.3	36.3	30.2	24.5
6TS06300	6V 6 OPzS 300	237	213	195	160	123	85.7	66.3	56.5	48.3	42.5	34.8	29.0

Part Number	DIN Type	Discharge Data Amps @ 20° C to 1.80 VPC											
		Discharge Time in Minutes				Discharge Time in Hours							
		3	10	15	30	1	2	3	4	5	6	8	10
12TS01050	12V 1 OPzS 50	57.0	49.0	44.0	34.0	25.2	17.1	13.5	11.0	9.50	8.20	6.90	5.90
12TS02100	12V 2 OPzS 100	110	96.0	85.0	66.0	49.0	32.3	24.1	19.6	17.1	15.4	12.5	10.1
12TS03150	12V 3 OPzS 150	160	135	120	95.0	70.4	47.1	36.0	29.8	25.7	22.7	18.6	15.0
6TS04200	6V 4 OPzS 200	205	178	160	130	92.0	61.3	47.5	38.5	34.9	30.4	25.0	20.3
6TS05250	6V 5 OPzS 250	240	212	190	150	110	74.5	59.2	49.0	42.8	37.8	31.2	25.5
6TS06300	6V 6 OPzS 300	260	240	218	177	135	89.3	70.4	59.5	51.0	44.5	35.8	30.3

EverExceed Tubular OPzS block Discharge Data Amperes at 20°C to 1.75-1.65 VPC

Part Number	DIN Type	Discharge Data Amps @ 20° C to 1.75 VPC											
		Discharge Time in Minutes				Discharge Time in Hours							
		3	10	15	30	1	2	3	4	5	6	8	10
12TS01050	12V 1 OPzS 50	65.0	56.0	48.0	36.0	26.5	18.4	14.0	11.6	9.80	8.60	7.20	6.20
12TS02100	12V 2 OPzS 100	125	109	95.0	71.0	51.3	34.0	25.9	20.8	18.2	16.2	13.0	10.2
12TS03150	12V 3 OPzS 150	185	155	136	102	73.4	50.0	37.5	31.2	27.0	24.0	19.4	15.3
6TS04200	6V 4 OPzS 200	235	206	185	140	97.9	66.0	50.0	40.5	35.8	31.2	25.7	20.4
6TS05250	6V 5 OPzS 250	285	250	220	165	120	81.0	62.0	21.0	44.0	39.1	32.3	26.1
6TS06300	6V 6 OPzS 300	340	295	260	200	143	98.3	74.4	62.0	52.5	45.8	36.8	30.6

Part Number	DIN Type	Discharge Data Amps @ 20° C to 1.70VPC											
		Discharge Time in Minutes				Discharge Time in Hours							
		3	10	15	30	1	2	3	4	5	6	8	10
12TS01050	12V 1 OPzS 50	80.0	66.0	56.0	40.0	27.7	18.7	14.5	11.9	10.0	8.80	7.30	6.30
12TS02100	12V 2 OPzS 100	156	130	111	81.0	55.0	35.3	26.8	21.6	18.9	16.8	13.4	10.4
12TS03150	12V 3 OPzS 150	229	186	163	118	82.0	52.6	39.0	32.2	28.5	25.2	20.1	15.7
6TS04200	6V 4 OPzS 200	293	247	219	160	111	68.5	52.5	41.8	36.1	32.0	26.0	21.0
6TS05250	6V 5 OPzS 250	362	307	268	193	133	84.5	63.9	52.6	45.6	40.5	33.3	26.6
6TS06300	6V 6 OPzS 300	417	355	315	231	163	105	78.0	64.1	54.0	46.6	37.5	31.3

Part Number	DIN Type	Discharge Data Amps @ 20° C to 1.67 VPC											
		Discharge Time in Minutes				Discharge Time in Hours							
		3	10	15	30	1	2	3	4	5	6	8	10
12TS01050	12V 1 OPzS 50	65.0	56.0	48.0	36.0	26.5	18.4	14.0	11.6	9.80	8.60	7.20	6.20
12TS02100	12V 2 OPzS 100	125	109	95.0	71.0	51.3	34.0	25.9	20.8	18.2	16.2	13.0	10.2
12TS03150	12V 3 OPzS 150	185	155	136	102	73.4	50.0	37.5	31.2	27.0	24.0	19.4	15.3
6TS04200	6V 4 OPzS 200	235	206	185	140	97.9	66.0	50.0	40.5	35.8	31.2	25.7	20.4
6TS05250	6V 5 OPzS 250	285	250	220	165	120	81.0	62.0	21.0	44.0	39.1	32.3	26.1
6TS06300	6V 6 OPzS 300	340	295	260	200	143	98.3	74.35	62.0	52.5	45.8	36.8	30.6

Part Number	DIN Type	Discharge Data Amps @ 20° C to 1.65 VPC											
		Discharge Time in Minutes				Discharge Time in Hours							
		3	10	15	30	1	2	3	4	5	6	8	10
12TS01050	12V 1 OPzS 50	83.0	68.0	58.0	41.0	27.9	18.8	14.5	11.9	10.0	8.80	7.30	6.30
12TS02100	12V 2 OPzS 100	162	135	115	83.0	55.5	35.5	26.9	21.7	19.0	16.9	13.5	10.4
12TS03150	12V 3 OPzS 150	240	193	168	120	83.0	53.0	39.2	32.4	28.6	25.5	20.2	15.7
6TS04200	6V 4 OPzS 200	307	258	226	163	113	69.0	52.9	42.0	36.2	32.2	26.2	21.0
6TS05250	6V 5 OPzS 250	380	320	278	189	135	85.0	64.1	52.8	46.0	40.8	33.4	26.6
6TS06300	6V 6 OPzS 300	435	369	326	237	165	106	78.5	64.4	54.2	46.8	37.6	31.3

EverExceed Tubular OPzS Cell Discharge Data Amperes at 20°C to 1.87 VPC

Part Number	DIN Type	Discharge Data Amps @ 20° C													
		Discharge Time in Minutes					Discharge Time in Hours								
		3	10	15	20	30	1	1.5	2	3	4	5	8	10	20
2TS020100	2 OPzS 100	82.5	81.1	76.0	71.5	65.2	51.2	42.7	36.3	28.6	23.4	20.0	14.1	11.7	6.30
2TS030150	3 OPzS 150	106	105	98.5	91.6	83.4	66.2	55.3	47.5	37.3	30.6	26.2	18.6	15.4	8.40
2TS040200	4 OPzS 200	135	134	125	118	107	84.3	70.4	60.4	47.5	39.0	33.3	23.7	19.7	10.6
2TS050250	5 OPzS 250	163	161	151	142	130	103	86.3	74.5	58.2	47.9	41.1	29.2	24.3	13.2
2TS060300	6 OPzS 300	189	186	175	166	152	121	102	88.4	68.7	56.5	48.7	34.7	29.0	15.7
2TS050350	5 OPzS 350	190	187	180	174	160	135	115	99.8	79.8	66.5	57.8	41.7	34.8	19.3
2TS060420	6 OPzS 420	216	214	207	201	186	157	135	118	95.6	79.7	69.2	50.0	41.7	23.1
2TS070490	7 OPzS 490	247	245	236	229	213	179	156	136	111	92.5	80.6	58.2	48.5	26.9
2TS060600	6 OPzS 600	279	277	267	257	239	207	181	163	131	111	98.5	72.9	62.3	34.5
2TS080800	8 OPzS 800	403	396	378	365	337	290	252	222	178	152	134	98.1	83.4	46.1
2TS101000	10 OPzS 1000	484	480	461	444	412	355	309	276	221	188	167	123	104	57.8
2TS121200	12 OPzS 1200	562	558	538	518	482	416	365	328	264	225	198	147	125	69.5
2TS121500	12 OPzS 1500	522	521	511	498	479	419	385	352	397	257	230	173	148	79.8
2TS141750	14 OPzS 1750	553	552	541	532	508	444	408	372	314	272	245	183	157	84.5
2TS151875	15 OPzS 1875	593	591	580	570	544	476	437	399	336	291	263	196	168	90.5
2TS162000	16 OPzS 2000	754	752	731	712	676	578	525	473	392	339	305	229	196	105
2TS162250	18 OPzS 2250	791	789	769	748	712	615	561	507	427	370	333	249	213	115
2TS202500	20 OPzS 2500	937	936	910	885	779	720	654	589	488	423	380	284	244	132
2TS243000	24 OPzS 3000	1080	1075	1050	1020	972	841	766	693	584	506	455	340	292	157

EverExceed Tubular OPzS Cell Discharge Data Amperes at 20°C to 1.85 VPC

Part Number	DIN Type	Discharge Data Amps @ 20° C													
		Discharge Time in Minutes					Discharge Time in Hours								
		3	10	15	20	30	1	1.5	2	3	4	5	8	10	20
2TS020100	2 OPzS 100	93.4	91.2	84.5	79.7	71.4	54.8	45.5	38.5	30.2	24.6	21.0	14.6	12.3	6.60
2TS030150	2 OPzS 150	121	118	110	101	90.8	71.0	58.9	50.3	39.4	32.2	27.4	19.3	16.2	8.70
2TS040200	4 OPzS 200	153	150	139	131	118	90.3	75.0	64.1	50.2	41.0	34.9	24.6	20.6	11.0
2TS050250	5 OPzS 250	185	181	168	159	143	110	92.0	79.0	61.5	50.3	42.9	30.3	25.5	13.7
2TS060300	6 OPzS 300	215	210	195	185	167	130	109	93.7	72.6	59.4	50.9	35.9	30.4	16.3
2TS050350	5 OPzS 350	215	211	202	194	178	148	124	107	84.4	70.2	60.8	43.7	36.5	20.0
2TS060420	6 OPzS 420	244	240	232	224	207	172	146	127	101	84.0	72.8	52.3	43.7	23.9
2TS070490	7 OPzS 490	279	274	265	256	237	196	168	147	118	98.1	84.8	61.0	50.9	27.8
2TS060600	6 OPzS 600	313	309	296	286	265	228	198	177	140	118	103	76.2	65.3	35.7
2TS080800	8 OPzS 800	457	446	422	405	373	318	275	241	191	161	141	103	87.4	47.8
2TS101000	10 OPzS 1000	546	539	513	493	456	390	338	299	237	199	175	128	109	59.9
2TS121200	12 OPzS 1200	631	623	597	575	534	459	399	256	282	237	208	153	132	71.9
2TS121500	12 OPzS 1500	599	596	583	568	544	469	428	388	323	277	246	184	156	85.0
2TS141750	14 OPzS 1750	635	632	617	602	576	497	454	410	342	293	261	194	166	90.0
2TS151875	15 OPzS 1875	680	677	661	645	617	533	486	439	366	314	280	208	178	96.4
2TS162000	16 OPzS 2000	865	861	835	811	768	648	585	522	427	366	326	243	207	112
2TS162250	18 OPzS 2250	908	903	878	853	808	688	623	559	465	399	355	265	225	122
2TS202500	20 OPzS 2500	1075	1070	1040	1010	956	806	728	649	532	456	406	302	258	140
2TS243000	24 OPzS 3000	1240	1235	1200	1165	1100	942	852	764	636	546	486	362	308	167

EverExceed Tubular OPzS Cell Discharge Data Amperes at 20°C to 1.83 VPC

Part Number	DIN Type	Discharge Data Amps @ 20° C													
		Discharge Time in Minutes					Discharge Time in Hours								
		3	10	15	20	30	1	1.5	2	3	4	5	8	10	20
2TS020100	2 OPzS 100	104	101	93.0	86.9	76.8	57.5	47.4	39.9	31.2	25.4	21.6	14.9	12.5	6.70
2TS030150	2 OPzS 150	134	130	120	110	97.4	74.3	61.3	52.2	40.8	33.2	28.2	19.6	16.4	8.90
2TS040200	4 OPzS 200	171	166	153	143	126	94.7	78.0	66.4	52.0	42.4	36.0	25.0	20.9	11.3
2TS050250	5 OPzS 250	207	201	185	173	154	116	95.7	81.9	63.7	52.0	44.3	30.8	25.9	14.0
2TS060300	6 OPzS 300	241	231	215	201	180	136	113	97.3	75.2	61.4	52.5	36.5	30.9	16.7
2TS050350	5 OPzS 350	238	232	221	213	194	158	131	113	87.9	72.6	62.5	44.5	37.1	20.3
2TS060420	6 OPzS 420	272	265	255	245	225	183	154	133	105	86.8	74.8	53.2	44.4	24.3
2TS070490	7 OPzS 490	310	303	291	280	257	209	178	154	123	102	87.1	62.0	51.7	28.4
2TS060600	6 OPzS 600	347	341	325	312	289	245	211	187	147	123	107	77.8	66.4	36.4
2TS080800	8 OPzS 800	505	493	464	443	407	342	292	255	199	166	145	105	88.8	48.7
2TS101000	10 OPzS 1000	605	595	563	539	497	420	360	317	248	207	180	131	111	61.0
2TS121200	12 OPzS 1200	698	686	655	629	583	494	426	376	295	247	215	157	134	73.3
2TS121500	12 OPzS 1500	673	668	652	633	602	513	465	418	343	292	258	191	162	88.3
2TS141750	14 OPzS 1750	713	708	691	671	638	543	493	442	364	310	274	201	172	93.4
2TS151875	15 OPzS 1875	764	759	740	719	684	582	528	474	390	332	294	215	184	100
2TS162000	16 OPzS 2000	973	966	934	904	850	708	634	562	454	387	342	252	214	116
2TS162250	18 OPzS 2250	1015	1010	982	951	894	752	677	602	495	421	373	275	233	127
2TS202500	20 OPzS 2500	1205	1200	1165	1125	1060	881	790	700	566	482	426	313	267	145
2TS243000	24 OPzS 3000	1390	1380	1345	1300	1220	1030	924	825	675	575	510	375	319	174

EverExceed Tubular OPzS Cell Discharge Data Amperes at 20°C to 1.80 VPC

Part Number	DIN Type	Discharge Data Amps @ 20° C													
		Discharge Time in Minutes					Discharge Time in Hours								
		3	10	15	20	30	1	1.5	2	3	4	5	8	10	20
2TS020100	2 OPzS 100	122	116	106	97.7	84.8	61.5	50.1	42.0	32.8	26.6	22.6	15.3	12.8	7.00
2TS030150	2 OPzS 150	155	148	135	124	107	79.2	64.8	54.9	42.9	34.8	29.5	20.1	16.8	9.20
2TS040200	4 OPzS 200	199	190	174	161	140	101	82.5	69.9	54.6	44.4	37.6	25.6	21.4	11.8
2TS050250	5 OPzS 250	241	230	211	195	170	124	101	86.3	66.9	54.5	46.3	31.6	26.5	14.6
2TS060300	6 OPzS 300	281	268	245	227	199	146	120	103	79.0	64.3	54.9	37.4	31.6	17.4
2TS050350	5 OPzS 350	273	264	251	240	216	172	141	120	93.1	76.2	65.0	45.6	38.0	20.9
2TS060420	6 OPzS 420	314	303	289	277	252	200	166	142	111	90.9	77.8	54.6	45.5	25.0
2TS070490	7 OPzS 490	358	346	330	316	287	229	192	164	130	106	90.6	63.6	53.0	29.2
2TS060600	6 OPzS 600	398	388	368	352	325	271	232	202	156	129	112	80.2	68.0	37.4
2TS080800	8 OPzS 800	572	564	528	501	457	378	319	277	211	175	152	108	91.0	50.1
2TS101000	10 OPzS 1000	695	678	639	609	559	464	394	343	263	218	189	135	114	62.7
2TS121200	12 OPzS 1200	800	781	741	710	655	547	467	407	315	261	225	162	137	75.4
2TS121500	12 OPzS 1500	785	777	756	731	690	578	520	462	374	316	277	201	170	93.2
2TS141750	14 OPzS 1875	831	823	801	774	731	612	551	490	396	334	293	212	180	98.6
2TS151875	15 OPzS 1875	890	882	858	829	783	656	590	525	424	358	314	227	193	106
2TS162000	16 OPzS 2000	1135	1125	1080	1040	974	798	709	622	495	418	367	265	225	123
2TS162250	18 OPzS 2250	1185	1175	1140	1095	1025	848	757	666	539	455	399	289	245	134
2TS202500	20 OPzS 2500	1390	1375	1345	1300	1210	993	884	775	616	520	456	330	280	153
2TS243000	24 OPzS 3000	1620	1605	1555	1500	1400	1160	1035	911	737	622	546	395	335	184

EverExceed Tubular OPzS Cell Discharge Data Amperes at 20°C to 1.75 VPC

Part Number	DIN Type	Discharge Data Amps @ 20° C													
		Discharge Time in Minutes					Discharge Time in Hours								
		3	10	15	20	30	1	1.5	2	3	4	5	8	10	20
2TS020100	2 OPzS 100	147	137	125	113	96.1	66.4	52.9	44.2	34.3	27.7	23.5	15.9	13.1	7.20
2TS030150	2 OPzS 150	188	175	158	144	122	85.3	68.5	57.8	44.9	36.4	30.7	21.0	17.3	9.50
2TS040200	4 OPzS 200	243	226	205	186	158	109	87.2	73.5	57.1	46.3	39.1	26.7	22.1	12.1
2TS050250	5 OPzS 250	294	274	249	225	193	134	107	90.8	70.0	56.8	48.1	32.9	27.3	15.0
2TS060300	6 OPzS 300	343	319	290	263	226	158	127	108	82.6	67.0	57.1	39.0	32.6	17.8
2TS050350	5 OPzS 350	333	316	296	281	247	190	153	129	97.3	79.7	68.0	47.1	39.1	21.5
2TS060420	6 OPzS 420	383	364	341	323	288	221	180	152	116	95.0	81.4	56.4	46.9	25.7
2TS070490	7 OPzS 490	438	416	390	369	328	252	207	176	136	111	94.9	65.7	54.6	29.9
2TS060600	6 OPzS 600	480	462	437	416	381	306	258	220	167	136	116	83.0	70.0	38.4
2TS080800	8 OPzS 800	703	677	630	592	534	430	353	303	226	184	157	112	92.8	51.4
2TS101000	10 OPzS 1000	843	812	761	719	654	526	438	374	281	229	196	140	117	64.4
2TS121200	12 OPzS 1200	968	932	881	838	767	617	521	443	336	273	233	167	141	77.4
2TS121500	12 OPzS 1500	966	952	923	884	824	676	598	524	413	346	301	212	178	97.4
2TS141750	14 OPzS 1750	1025	1010	977	936	873	716	634	554	437	366	319	225	188	103
2TS151875	15 OPzS 1875	1098	1082	1047	1003	935	767	679	594	468	392	342	241	201	110
2TS162000	16 OPzS 2000	1395	1375	1320	1260	1165	933	817	705	547	458	398	281	235	129
2TS162250	18 OPzS 2250	1460	1440	1390	1325	1225	993	871	755	595	498	434	306	256	141
2TS202500	20 OPzS 2500	1735	1710	1645	1565	1450	1165	1015	877	680	569	496	350	293	161
2TS243000	24 OPzS 3000	2000	1970	1900	1810	1675	1360	1190	1030	814	681	593	419	350	192

EverExceed Tubular OPzS Cell Discharge Data Amperes at 20°C to 1.70 VPC

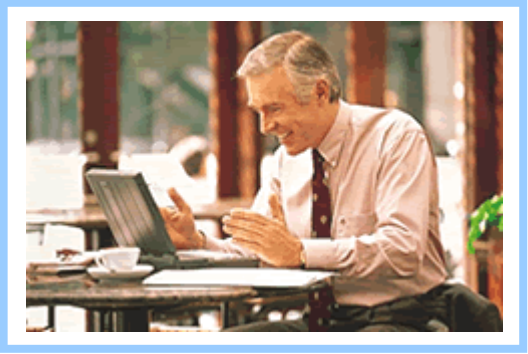
Part Number	DIN Type	Discharge Data Amps @ 20° C													
		Discharge Time in Minutes					Discharge Time in Hours								
		3	10	15	20	30	1	1.5	2	3	4	5	8	10	20
2TS020100	2 OPzS 100	173	157	139	125	105	69.7	54.8	45.2	35.2	28.3	23.9	16.0	13.3	7.30
2TS030150	2 OPzS 150	220	200	177	160	134	89.4	71.0	59.1	46.0	37.0	31.2	21.1	17.5	9.60
2TS040200	4 OPzS 200	284	258	229	206	172	115	90.3	75.2	58.6	47.3	39.7	26.9	22.3	12.2
2TS050250	5 OPzS 250	344	313	278	250	210	141	111	93.0	71.8	57.9	48.9	33.1	27.6	15.1
2TS060300	6 OPzS 300	403	366	325	292	247	166	132	111	84.8	68.4	58.0	39.3	32.9	18.0
2TS050350	5 OPzS 350	394	368	339	316	274	202	161	134	100	81.4	69.5	47.1	39.9	22.0
2TS060420	6 OPzS 420	453	423	390	364	319	235	189	158	120	97.7	83.3	57.8	47.8	26.4
2TS070490	7 OPzS 490	517	483	446	416	364	269	218	183	140	114	97.0	67.3	55.7	30.7
2TS060600	6 OPzS 600	562	535	507	479	433	337	279	233	173	139	118	84.3	70.7	39.1
2TS080800	8 OPzS 800	824	785	728	678	606	471	379	322	237	190	160	114	94.6	52.3
2TS101000	10 OPzS 1000	988	941	881	826	743	577	471	397	294	237	199	142	119	65.6
2TS121200	12 OPzS 1200	1135	1080	1020	964	873	678	562	469	349	281	237	170	142	78.8
2TS121500	12 OPzS 1500	1145	1125	1085	1030	950	768	665	573	442	367	318	219	182	100
2TS141750	14 OPzS 1750	1215	1190	1150	1090	1005	814	704	607	468	389	337	232	193	106
2TS151875	15 OPzS 1875	1302	1275	1232	1168	1077	872	754	650	501	417	361	249	207	114
2TS162000	16 OPzS 2000	1655	1625	1555	1470	1345	1060	907	771	585	486	421	290	241	132
2TS162250	18 OPzS 2250	1735	1700	1635	1545	1410	1125	968	826	637	529	458	316	262	144
2TS202500	20 OPzS 2500	2060	2020	1930	1830	1670	1320	1130	960	728	605	524	361	300	165
2TS243000	24 OPzS 3000	2375	2330	2230	2115	1930	1540	1325	1130	871	723	626	462	358	197

EverExceed Tubular OPzS Cell Discharge Data Amperes at 20°C to 1.65 VPC

Part Number	DIN Type	Discharge Data Amps @ 20° C													
		Discharge Time in Minutes					Discharge Time in Hours								
		3	10	15	20	30	1	1.5	2	3	4	5	8	10	20
2TS020100	2 OPzS 100	196	174	151	135	111	71.8	55.8	46.4	35.7	28.6	24.1	16.0	13.3	7.30
2TS030150	2 OPzS 150	249	221	194	172	142	91.7	72.3	60.1	46.7	37.5	31.5	21.1	17.5	9.60
2TS040200	4 OPzS 200	322	286	249	222	182	118	92.0	76.4	59.4	47.7	40.1	26.9	22.3	12.2
2TS050250	5 OPzS 250	392	348	303	270	222	145	113	94.6	72.8	58.6	49.4	33.1	27.6	15.1
2TS060300	6 OPzS 300	458	407	355	315	261	171	134	113	86.0	69.3	58.6	39.3	32.9	18.0
2TS050350	5 OPzS 350	454	417	379	349	297	211	167	137	103	82.9	69.9	47.1	39.9	22.0
2TS060420	6 OPzS 420	522	480	437	402	346	246	196	162	123	99.1	83.7	57.8	47.8	26.4
2TS070490	7 OPzS 490	596	548	499	459	395	280	226	187	143	115	97.5	67.3	55.7	30.7
2TS060600	6 OPzS 600	643	605	576	541	482	364	294	243	177	141	119	86.4	71.4	39.4
2TS080800	8 OPzS 800	945	890	824	760	673	502	399	335	244	194	162	116	95.6	52.8
2TS101000	10 OPzS 1000	1130	1065	999	929	826	620	496	414	302	241	201	145	120	66.1
2TS121200	12 OPzS 1200	1295	1220	1160	1090	971	733	592	490	358	286	240	174	144	79.5
2TS121500	12 OPzS 1500	1330	1300	1240	1175	1070	853	721	612	462	382	330	223	184	101
2TS141750	14 OPzS 1750	1410	1375	1315	1245	1135	904	763	648	490	405	349	236	194	107
2TS151875	15 OPzS 1875	1511	1473	1409	1334	1216	969	818	694	525	434	374	253	208	115
2TS162000	16 OPzS 2000	1920	1875	1775	1675	1510	1180	984	824	612	506	436	295	243	133
2TS162250	18 OPzS 2250	2015	1965	1870	1765	1590	1250	1050	882	666	550	475	321	265	145
2TS202500	20 OPzS 2500	2390	2335	2215	2090	1885	1465	1220	1025	762	630	543	367	302	166
2TS243000	24 OPzS 3000	2755	2690	2555	2415	2175	1710	1435	1205	911	753	650	439	362	199

EverExceed Tubular OPzS Cell Discharge Data Amperes at 20°C to 1.60 VPC

Part Number	DIN Type	Discharge Data Amps @ 20° C													
		Discharge Time in Minutes					Discharge Time in Hours								
		3	10	15	20	30	1	1.5	2	3	4	5	8	10	20
2TS020100	2 OPzS 100	216	188	162	143	116	73.3	56.4	46.5	36.0	29.4	24.0	16.0	13.3	7.30
2TS030150	2 OPzS 150	275	239	207	182	147	93.4	72.9	60.7	47.0	37.3	31.4	21.1	17.5	9.60
2TS040200	4 OPzS 200	355	309	267	235	190	121	92.8	77.3	59.9	47.6	39.9	26.9	22.3	12.2
2TS050250	5 OPzS 250	434	377	325	286	232	148	114	95.7	73.4	58.3	49.2	33.1	27.6	15.1
2TS060300	6 OPzS 300	508	442	381	335	272	176	136	114	86.6	68.8	58.3	39.3	32.9	18.0
2TS050350	5 OPzS 350	515	466	418	377	319	217	171	139	105	83.4	69.2	47.1	39.9	22.0
2TS060420	6 OPzS 420	592	536	481	435	370	253	200	165	125	99.3	82.8	57.8	47.8	26.4
2TS070490	7 OPzS 490	676	612	549	496	423	288	231	190	146	116	96.5	67.3	55.7	30.7
2TS060600	6 OPzS 600	723	673	645	602	528	388	305	252	179	142	119	86.4	71.4	39.4
2TS080800	8 OPzS 800	1065	992	917	837	737	524	416	342	248	195	162	116	95.6	52.8
2TS101000	10 OPzS 1000	1270	1185	1115	1030	905	653	516	426	305	242	201	145	120	66.1
2TS121200	12 OPzS 1200	1455	1355	1300	1215	1065	781	614	508	360	286	240	174	144	79.5
2TS121500	12 OPzS 1500	1515	1470	1395	1320	1190	933	767	642	476	391	337	224	184	101
2TS141750	14 OPzS 1750	1605	1560	1475	1395	1260	988	812	680	504	414	356	238	194	107
2TS151875	15 OPzS 1875	1720	1671	1580	1495	1350	1059	870	729	540	444	381	255	208	115
2TS162000	16 OPzS 2000	2185	2125	1995	1880	1680	1290	1045	864	630	518	445	297	243	133
2TS162250	18 OPzS 2250	2290	2225	2100	1975	1765	1370	1115	926	686	564	485	323	265	145
2TS202500	20 OPzS 2500	2725	2645	2485	2340	2090	1600	1305	1080	784	645	554	370	302	166
2TS243000	24 OPzS 3000	3135	3045	2870	2705	2415	1875	1525	1265	938	771	663	442	362	199



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