## TS-ED Series 105°C, 3000 hours

- Highest ripple current capability for demanding inverter applications
- 2 and 3 pin versions available
- 3000 hour life at 105°C



Rated Working Voltage:		2	00 ~ 25	0 VDC				400 ~ 450 VDC						
Operating Temperature:			-40 ~ +	105°C				-25 ~ +105°C						
Nominal Capacitance:			220~22	200 µF				56 ~ 560μF						
Capacitance Tolerance:	± 20%													
Dissipation Factor (120Hz, 20°C):	15% maximum (120Hz, +20°C)													
Leakage Current:	3√CV (μA) max. after 5 minutes; $C = Capacitance$ in μF, $V = WV$													
Ripple Current Multipliers:	Ripple Current Frequency Factors Ripple Current Ambient Temperature Factors*													
	Frequency(Hz): 50 60 100~120 500 1k 10							Ambient Temperature:	105°C	85°C	70°C	60°C	≤45°C	
	Multiplier: 0.71 0.78 1.0 1.2 1.25 1.						1.4	Multiplier:	1.0	1.7	2.0	2.2	2.35	
Endurance:	3000 hours at +105°C with maximum specified ripple current (see page 6)													

<sup>\*</sup>Use of temperature ripple current multipliers may limit life to the hours specified for the maximum operating temperature.

#### Part Number System

lumber System										
E E T  Common Code	E D Series	Voltage	Capacitance		$\Box$	$\Box$				
	Code	Code	Code						Г	Insulation Options
					Di	ameter / T	erminal Co	de	Α	PVC with top plate
					# of pins:	2	2	3		PVC without top plate
			_		pin length:	6.3mm	4.0mm	4.0mm		(no suffix)
				٦٢	22mm	В	Н	P	J	PET sleeve without plate
				iameter	25mm	C	J	Q		
				jan	30mm	D	K	R		
					35mm	Е	L	S		
					(Plea	ase see pa	ge 10 for de	tails)		

**TS-ED Standard Ratings** (part numbers shown with 6.3mm length terminal and top vinyl plate)

Сар.	Size (mm)	Max 105°	C R.C. (A <sub>rms</sub> )	20°C ESR	? ( <b>Ω</b> , max.)	Panasonic	Cap.	Cap. Size (mm) Max 105°C R.C. (A <sub>rms</sub> ) 20°C ESR (Ω, max.)			Panasonic				
(μF)	DxL	120Hz	10kHz~	120Hz	20kHz	Part Number	(µF)	DxL	120Hz	10kHz~	120Hz	20kHz	Part Number		
		200 V	DC Working	, 250 VDC	Surge			250 VDC Working, 300 VDC Surge (continued)							
270	22 x 25	1.42	2.03	0.553	0.249	EETED2D271BA	390	22 x 40	1.72	2.45	0.383	0.172	EETED2E391BA		
330	22 x 30	1.56	2.23	0.452	0.203	EETED2D331BA		25 x 30	1.71	2.44	0.383	0.172	EETED2E391CA		
390	22 x 30	1.71	2.44	0.383	0.172	EETED2D391BA		30 x 25	1.71	2.44	0.383	0.172	EETED2E391DA		
	25 x 25	1.71	2.44	0.383	0.172	EETED2D391CA	470	22 x 45	1.85	2.64	0.317	0.143	EETED2E471BA		
470	22 x 35	1.85	2.64	0.317	0.143	EETED2D471BA		25 x 35	1.85	2.64	0.317	0.143	EETED2E471CA		
	25 x 30	1.85	2.64	0.317	0.143	EETED2D471CA		30 x 30	1.85	2.64	0.317	0.143	EETED2E471DA		
560	22 x 40	2.14	3.05	0.266	0.120	EETED2D561BA	560	25 x 40	2.14	3.05	0.266	0.120	EETED2E561CA		
	25 x 30	2.14	3.05	0.266	0.120	EETED2D561CA		30 x 30	2.14	3.05	0.266	0.120	EETED2E561DA		
	30 x 25	2.14	3.05	0.266	0.120	EETED2D561DA		35 x 25	2.14	3.05	0.266	0.133	EETED2E561EA		
680	22 x 45	2.42	3.45	0.219	0.099	EETED2D681BA	680	25 x 45	2.42	3.45	0.219	0.099	EETED2E681CA		
	25 x 35	2.42	3.45	0.219	0.099	EETED2D681CA		30 x 35	2.42	3.45	0.219	0.099	EETED2E681DA		
	30 x 30	2.42	3.45	0.219	0.099	EETED2D681DA		35 x 30	2.42	3.45	0.219	0.110	EETED2E681EA		
820	22 x 50	2.63	3.76	0.182	0.082	EETED2D821BA	820	30 x 40	2.63	3.76	0.182	0.082	EETED2E821DA		
	25 x 40	2.63	3.76	0.182	0.082	EETED2D821CA		35 x 35	2.63	3.76	0.182	0.091	EETED2E821EA		
	30 x 30	2.63	3.76	0.182	0.082	EETED2D821DA	1000	30 x 50	2.84	4.06	0.149	0.067	EETED2E102DA		
	35 x 25	2.63	3.76	0.182	0.091	EETED2D821EA		35 x 40	2.84	4.06	0.149	0.067	EETED2E102EA		
1000	25 x 45	2.84	4.06	0.149	0.067	EETED2D102CA	1200	35 x 45	3.13	4.47	0.124	0.062	EETED2E122EA		
	30 x 35	2.84	4.06	0.149	0.067	EETED2D102DA	1500	35 x 50	3.56	5.08	0.099	0.050	EETED2E152EA		
	35 x 30	2.84	4.06	0.149	0.067	EETED2D102EA	400 VDC Working, 450 VDC Surge								
1200	30 x 40	3.13	4.47	0.124	0.062	EETED2D122DA	82	22 x 25	0.80	1.14	1.617	0.728	EETED2G820BA		
	35 x 35	3.13	4.47	0.124	0.062	EETED2D122EA	100	22 x 30	0.91	1.30	1.326	0.597	EETED2G101BA		
1500	30 x 50	3.56	5.08	0.099	0.050	EETED2D152DA		25 x 25	0.91	1.30	1.326	0.597	EETED2G101CA		
	35 x 40	3.56	5.08	0.099	0.050	EETED2D152EA	120	22 x 35	1.02	1.46	1.105	0.497	EETED2G121BA		
1800	35 x 45	3.84	5.48	0.083	0.041	EETED2D182EA		25 x 30	1.02	1.46	1.105	0.497	EETED2G121CA		
2200	35 x 50	4.12	5.89	0.068	0.033	EETED2D222EA	150	22 x 40	1.07	1.53	0.884	0.398	EETED2G151BA		
		250 V	DC Working	, 300 VDC	Surge			25 x 30	1.07	1.53	0.884	0.398	EETED2G151CA		
220	22 x 30	1.28	1.83	0.678	0.305	EETED2E221BA		30 x 25	1.07	1.53	0.884	0.398	EETED2G151DA		
270	22 x 30	1.42	2.03	0.553	0.249	EETED2E271BA	180	22 x 45	1.12	1.60	0.737	0.332	EETED2G181BA		
	25 x 25	1.42	2.03	0.553	0.249	EETED2E271CA		25 x 35	1.12	1.60	0.737	0.332	EETED2G181CA		
330	22 x 35	1.64	2.34	0.452	0.203	EETED2E331BA		30 x 30	1.12	1.60	0.737	0.332	EETED2G181DA		
	25 x 30	1.56	2.23	0.452	0.203	EETED2E331CA	220	22 x 50	1.42	2.03	0.603	0.271	EETED2G221BA		



#### **TS-ED Standard Ratings (continued)**

Cap.	Size (mm)	Max 105°C	C R.C. (A <sub>rms</sub> )	20°C ESD	(Ω, max.)	Panasonic					
(μF)	D x L	120Hz	10kHz~	120Hz	20kHz	Part Number					
(μ. /											
400 VDC Working, 450 VDC Surge (continued)  220 25 x 40 1.42 2.03 0.603 0.271 EETED2G221CA											
220	30 x 30	1.42	2.03	0.603	0.271	EETED2G221CA EETED2G221DA					
	35 x 25	1.42	2.03	0.603	0.271	EETED2G221EA					
270	25 x 45	1.56	2.23	0.491	0.271	EETED2G271CA					
270	30 x 35	1.56	2.23	0.491	0.221	EETED2G271DA					
	35 x 30	1.56	2.23	0.491	0.221	EETED2G271EA					
330	30 x 40	1.71	2.44	0.402	0.181	EETED2G331DA					
	35 x 30	1.71	2.44	0.402	0.181	EETED2G331EA					
390	30 x 45	1.85	2.64	0.340	0.153	EETED2G391DA					
	35 x 35	1.85	2.64	0.340	0.153	EETED2G391EA					
470	35 x 40	2.01	2.87	0.282	0.127	EETED2G471EA					
560	35 x 45	2.35	3.36	0.237	0.107	EETED2G561EA					
		420 V	DC Working	, 470 VDC							
68	22 x 25	1.08	0.95	1.950	0.878	EETED2S680BA					
82	22 x 30	1.14	1.08	1.617	0.728	EETED2S820BA					
	25 x 25	1.14	1.08	1.617	0.728	EETED2S820CA					
100	22 x 30	1.30	1.14	1.326	0.597	EETED2S101BA					
4	25 x 25	1.30	1.14	1.326	0.597	EETED2S101CA					
120	22 x 35	1.46	1.30	1.105	0.497	EETED2S121BA					
450	25 x 30	1.46	1.30	1.105	0.497	EETED2S121CA					
150	22 x 40	1.53	1.46	0.884	0.398	EETED2S151BA					
	25 x 35	1.53	1.46	0.884	0.398	EETED2S151CA					
100	30 x 25	1.53	1.46	0.884	0.398	EETED2S151DA					
180	22 x 45 25 x 40	1.60	1.53	0.737	0.332	EETED2S181BA EETED2S181CA					
	30 x 30	1.60 1.60	1.53 1.53	0.737 0.737	0.332 0.332	EETED2S181CA EETED2S181DA					
	35 x 25	1.60	1.53	0.737	0.332	EETED2S181EA					
220	25 x 45	2.03	1.60	0.603	0.271	EETED2S221CA					
220	30 x 35	2.03	1.60	0.603	0.271	EETED2S221DA					
	35 x 30	2.03	1.60	0.603	0.271	EETED2\$221EA					
270	25 x 50	2.40	2.03	0.491	0.221	EETED2S271CA					
	30 x 40	2.40	2.03	0.491	0.221	EETED2\$271DA					
	35 x 30	2.40	2.03	0.491	0.221	EETED2S271EA					
330	30 x 45	2.54	2.45	0.402	0.181	EETED2S331DA					
	35 x 35	2.54	2.45	0.402	0.181	EETED2S331EA					
390	30 x 50	2.73	2.64	0.340	0.153	EETED2S391DA					
	35 x 40	2.73	2.64	0.340	0.153	EETED2S391EA					
470	35 x 45	3.18	2.82	0.282	0.127	EETED2S471EA					
			DC Working			1					
56	22 x 25	0.67	0.95	2.368	1.066	EETED2W560BA					
68	22 x 30	0.76	1.08	1.950	0.878	EETED2W680BA					
	25 x 25	0.76	1.08	1.950	0.878	EETED2W680CA					
82	22 x 30	0.80	1.14	1.617	0.728	EETED2W820BA					
	25 x 25	0.80	1.14	1.617	0.728	EETED2W820CA					
100	22 x 35	0.91	1.30	1.326	0.597	EETED2W101BA					
400	25 x 30	0.91	1.30	1.326	0.597	EETED2W101CA					
120	22 x 40	1.02	1.46	1.105	0.497	EETED2W121BA					
	25 x 35	1.02	1.46	1.105	0.497	EETED2W121CA					
150	30 x 25	1.02	1.46	1.105	0.497	EETED2W121DA					
150	22 x 45 25 x 40	1.07	1.53	0.884	0.398	EETED2W151BA EETED2W151CA					
	30 x 30	1.07 1.07	1.53 1.53	0.884 0.884	0.398 0.398	EETED2W151CA EETED2W151DA					
	35 x 25	1.07	1.53	0.884	0.398	EETED2W151DA EETED2W151EA					
180	22 x 50	1.12	1.60	0.737	0.332	EETED2W181BA					
100	25 x 40	1.12	1.60	0.737	0.332	EETED2W181CA					
	30 x 30	1.12	1.60	0.737	0.332	EETED2W181DA					
	35 x 25	1.12	1.60	0.737	0.332	EETED2W181EA					
220	25 x 45	1.42	2.03	0.603	0.271	EETED2W221CA					
	30 x 35	1.42	2.03	0.603	0.271	EETED2W221DA					
	35 x 30	1.42	2.03	0.603	0.271	EETED2W221EA					
270	30 x 40	1.72	2.45	0.491	0.221	EETED2W271DA					
	35 x 35	1.72	2.45	0.491	0.221	EETED2W271EA					
330	30 x 50	1.85	2.64	0.402	0.181	EETED2W331DA					
	35 x 40	1.85	2.64	0.402	0.181	EETED2W331EA					
390	35 x 40	1.97	2.82	0.340	0.153	EETED2W391EA					
470	35 x 50	2.47	3.53	0.282	0.127	EETED2W471EA					

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