

## Line up

Series	Features	Small size/Low profile	Large capacitance	Low ESR	High reliability	High voltage	Guaranteed at 125°C	Category temp. range (°C)	Rated voltage (V)	ESR (mΩ)	Capacitance (μF)	Size code	Size (mm)		
													L	W	H
TPG	Small size Low profile Large capacitance	●	●					-55 to 105	2.5 to 12.5	35 to 70	33 to 220	B1G	3.5	2.8	1.1
								-55 to 105	2.5 to 6.3	30 to 70	150 to 220	B15G	3.5	2.8	1.4
UPGRADE TPS	Small size/Low profile Large capacitance Face down terminal	●	●					-55 to 105	2.5 to 6.3	30 to 35	150 to 330	B1S	3.5	2.8	1.1
TPSF	Low ESR/Small size Large capacitance Face down terminal	●	●	●				-55 to 105	2.0 to 2.5	6 to 9	270	B2S	3.5	2.8	1.9
UPGRADE	Low ESR			●				-55 to 105	2.0 to 10	11 to 70	47 to 470	B2	3.5	2.8	1.9
TPE								-55 to 105	6.3	35	470	D15E	7.3	4.3	1.4
								-55 to 105	2.5 to 10	7 to 45	68 to 470	D2E	7.3	4.3	1.8
								-55 to 105	2.5 to 10	9 to 40	150 to 680	D3L	7.3	4.3	2.8
								-55 to 105	2.5 to 10	10 to 40	330 to 1500	D4	7.3	4.3	3.8
UPGRADE	Low ESR Large capacitance	●	●					-55 to 105	2.0	6	220 to 330	D2E	7.3	4.3	1.8
TPF								-55 to 105	2.5 to 10	5 to 25	150 to 680	D3L	7.3	4.3	2.8
								-55 to 105	2.5 to 6.3	5 to 35	470 to 1000	D4	7.3	4.3	3.8
TQS	High voltage	●				●		★-55 to 105	16 to 35	70 to 150	6.8 to 33	B1S	3.5	2.8	1.1
								-55 to 105	35	100	47	D15S	7.3	4.3	1.4
UPGRADE TQC	High voltage					●		-55 to 105	16 to 35	90 to 400	3.9 to 47	B2	3.5	2.8	1.9
								-55 to 105	16	40	33	D12	7.3	4.3	1.15
								-55 to 105	16 to 25	55 to 70	22 to 47	D15	7.3	4.3	1.4
								-55 to 105	16 to 35	40 to 150	10 to 150	D2	7.3	4.3	1.9
								-55 to 105	16 to 25	50 to 70	68 to 220	D3L	7.3	4.3	2.8
TA	High reliability			●		●		-55 to 105	4.0 to 10	70	47 to 100	B2	3.5	2.8	1.9
								-55 to 105	2.5 to 10	9 to 25	68 to 470	D2E	7.3	4.3	1.8
								-55 to 105	2.5 to 10	15 to 25	150 to 680	D3L	7.3	4.3	2.8
TV	High reliability Guaranteed at 125 °C			●		●		-55 to 125	6.3 to 10	25	68 to 150	D2E	7.3	4.3	1.8
								-55 to 125	10	25	150	D3L	7.3	4.3	2.8

★Not Recommended for New Design

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Series	Features	Small size/Low profile	Large capacitance	Low ESR	High reliability	High voltage	Guaranteed at 125°C	Category temp. range (°C)	Rated voltage (V)	ESR (mΩ)	Capacitance (μF)	Size code	Size (mm)		
													L	W	H
<b>UPGRADE</b>	Standard							-55 to 105	4.0 to 10	70	33 to 68	B2	3.5	2.8	1.9
TPB								-55 to 105	4.0 to 10	40 to 55	150 to 330	D3L	7.3	4.3	2.8
								-55 to 105	6.3 to 10	35 to 40	220 to 470	D4	7.3	4.3	3.8
TH	Guaranteed at 125 °C						●	-55 to 125	2.5 to 6.3	15 to 25	150 to 330	D2E	7.3	4.3	1.8
								-55 to 125	2.5 to 10	40 to 45	68 to 220	D2	7.3	4.3	1.9
								-55 to 125	4.0 to 6.3	40	220 to 330	D3L	7.3	4.3	2.8
								-55 to 125	6.3 to 10	35 to 40	220 to 470	D4	7.3	4.3	3.8
TC	Guaranteed at 125 °C						●	-55 to 125	2.5	9	330	B2	3.5	2.8	1.9
								-55 to 125	4.0 to 6.3	15 to 25	100 to 330	D2E	7.3	4.3	1.8
								-55 to 125	2.5 to 10	5 to 25	150 to 680	D3L	7.3	4.3	2.8
								-55 to 125	2.5 to 10	5 to 25	330 to 1000	D4	7.3	4.3	3.8
TDC	High voltage Guaranteed at 125 °C						● ●	-55 to 125	16 to 25	90 to 100	15 to 33	B2	3.5	2.8	1.9
								-55 to 125	16	50	100	D2	7.3	4.3	1.9
								-55 to 125	16 to 25	50 to 70	68 to 150	D3L	7.3	4.3	2.8
<b>UPGRADE</b>	Low profile	●						-55 to 105	6.3 to 12.5	55 to 80	10 to 47	B1	3.5	2.8	1.1
TPC								-55 to 105	6.3 to 10	40 to 100	68 to 330	D2	7.3	4.3	1.9