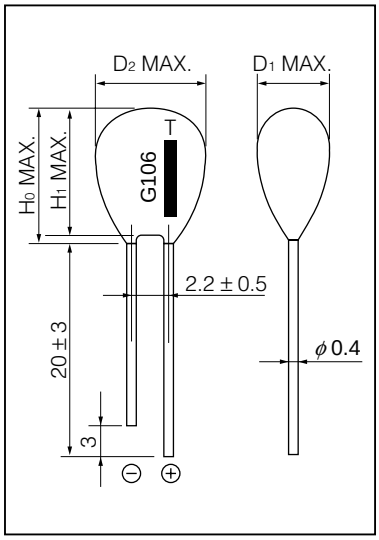
DSB Series Tantalum Chip Capacitors

DIMENSIONS [mm]



Size Code	D_1	D_2	H_1	H_0
NA	2.0	3.0	4.3	5.1
NB	2.3	3.0	4.5	5.3
NC	2.3	3.2	4.8	5.5
ND	2.5	3.2	5.0	5.8
NE	2.6	3.2	5.0	5.8
NF	2.8	3.2	5.1	5.9
NG	3.0	3.4	5.2	6.0
NH	3.4	3.8	5.4	6.2
NJ	3.7	4.1	5.6	6.4
NK	4.0	4.3	6.2	7.0
NL	4.5	4.5	6.4	7.2
NM	4.7	4.7	7.0	7.8

PERFORMANCE CHARACTERISTICS

Operating temperature range

–55 to +85°C with no voltage derating

Surge voltage

Rated voltage	4	6.3	10	16	20	25	35
Surge	5	8	13	20	26	32	46

Capacitance (at 25°C, 120 Hz)

Range	0.01 to 100 μF
Tolerance	± 20%, ±10%

Capacitance change with temperature

Not to exceed –12% at –55°C and +12% at +85°C

Tangent of loss angle (at 25°C, 120 Hz)

0.01 μF to 1.0 μF	less than 0.04
1.5 μF to 6.8 μF	less than 0.06
10 μF to 68 μF	less than 0.08
100 μF	less than 0.10

DC leakage current (at 25°C)

0.01 C•V* μA or 0.5 μA whichever is greater

Damp heat (90 to 95% RH at 40°C, 21 days (504 h))

Capacitance change	± 5%
Tangent of loss angle	initial requirements
DC Leakage current	initial requirements

Endurance (at 85°C, DC rated voltage, 1000 h)

Capacitance change	±10%
Tangent of loss angle	initial requirements
DC Leakage current	125% of initial requirements

μF \ DC rated voltage	4	6.3	10	16	20	25	35
0.01							MA
0.015							MA
0.022							MA
0.033							MA
0.047							MA
0.068							MA
0.1							MA
0.15							MB
0.22							MB
0.33						MC	MC
0.44					MC	MC	MD
0.68				MC	MD	MD	ME
1.0			MB	MD	ME	ME	MF
1.5		MB	MC	ME	MF	MF	
2.2	MB	MC	MD	MF	MG		
3.3	MC	MD	ME	MG			
4.7	MD	ME	MF	MH			
6.8	ME	MF	MG	MJ			
10	MF	MG	MH	MK			
15	MG	MH	MJ	ML			
22	MH	MJ	MK	MM			
33	MJ	MK	ML				
47	MK	ML	MM				
68	ML	MM					
100	MM						

* : Product of capacitance in μF and voltage in V.

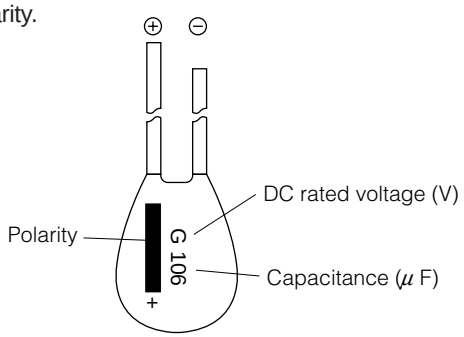
PART NUMBER SYSTEM

DSB 0G 106 M 1S

- 1S — Lead form 1S
- M — Capacitance tolerance: M : ±20%, K : ±10%
- 106 — Capacitance (pF): First two digits represent significant figures. third digit specifies number of zeros to follow.
- 0G — DC rated voltage: 0G:4 V, 0J:6.3 V, 1A:10 V, 1C:16 V, 1D:20 V, 1E:25 V, 1V:35 V
- DSB — DSB series

MARKINGS

The standard markinbg shows capacitance, DC working voltage, and polarity.



STANDARD RATINGS

Part Number	Capacitance (μF)	Size Code	DC Leakage Current (μA)	Tangent of Loss Angle
35 V Rating				
DSB1V103⌈⌋1S	0.01	MA	0.5	0.04
DSB1V153⌈⌋1S	0.015	MA	0.5	0.04
DSB1V223⌈⌋1S	0.022	MA	0.5	0.04
DSB1V333⌈⌋1S	0.033	MA	0.5	0.04
DSB1V473⌈⌋1S	0.047	MA	0.5	0.04
DSB1V683⌈⌋1S	0.068	MA	0.5	0.04
DSB1V104⌈⌋1S	0.1	MA	0.5	0.04
DSB1V154⌈⌋1S	0.15	MB	0.5	0.04
DSB1V224⌈⌋1S	0.22	MB	0.5	0.04
DSB1V334⌈⌋1S	0.33	MC	0.5	0.04
DSB1V474⌈⌋1S	0.47	MD	0.5	0.04
DSB1V684⌈⌋1S	0.68	ME	0.5	0.04
DSB1V105⌈⌋1S	1	MF	0.5	0.04
25 V Rating				
DSB1E334⌈⌋1S	0.33	MC	0.5	0.04
DSB1E474⌈⌋1S	0.47	MC	0.5	0.04
DSB1E684⌈⌋1S	0.68	MD	0.5	0.04
DSB1E105⌈⌋1S	1	ME	0.5	0.04
DSB1E155⌈⌋1S	1.5	MF	0.5	0.06
20 V Rating				
DSB1D474⌈⌋1S	0.47	MC	0.5	0.04
DSB1D684⌈⌋1S	0.68	MD	0.5	0.04
DSB1D105⌈⌋1S	1	ME	0.5	0.04
DSB1D155⌈⌋1S	1.5	MF	0.5	0.06
DSB1D225⌈⌋1S	2.2	MG	0.5	0.06
16 V Rating				
DSB1C684⌈⌋1S	0.68	MC	0.5	0.04
DSB1C105⌈⌋1S	1	MD	0.5	0.04
DSB1C155⌈⌋1S	1.5	ME	0.5	0.06
DSB1C225⌈⌋1S	2.2	MF	0.5	0.06
DSB1C335⌈⌋1S	3.3	MG	0.5	0.06
DSB1C475⌈⌋1S	4.7	MH	0.7	0.06
DSB1C685⌈⌋1S	6.8	MJ	1.0	0.06
DSB1C106⌈⌋1S	10	MK	1.6	0.08
DSB1C156⌈⌋1S	15	ML	2.4	0.08
DSB1C226⌈⌋1S	22	MM	3.5	0.08
10 V Rating				
DSB1A105⌈⌋1S	1	MB	0.5	0.04
DSB1A155⌈⌋1S	1.5	MC	0.5	0.06
DSB1A225⌈⌋1S	2.2	MD	0.5	0.06
DSB1A335⌈⌋1S	3.3	ME	0.5	0.06
DSB1A475⌈⌋1S	4.7	MF	0.5	0.06
DSB1A685⌈⌋1S	6.8	MG	0.6	0.06
DSB1A106⌈⌋1S	10	MH	1.0	0.08
DSB1A156⌈⌋1S	15	MJ	1.5	0.08
DSB1A226⌈⌋1S	22	MK	2.2	0.08
DSB1A336⌈⌋1S	33	ML	3.3	0.08
DSB1A476⌈⌋1S	47	MM	4.7	0.08
6.3 V Rating				
DSB0J155⌈⌋1S	1.5	MB	0.5	0.06
DSB0J225⌈⌋1S	2.2	MC	0.5	0.06
DSB0J335⌈⌋1S	3.3	MD	0.5	0.06
DSB0J475⌈⌋1S	4.7	ME	0.5	0.06
DSB0J685⌈⌋1S	6.8	MF	0.5	0.06
DSB0J106⌈⌋1S	10	MG	0.6	0.08
DSB0J156⌈⌋1S	15	MH	0.9	0.08
DSB0J226⌈⌋1S	22	MJ	1.3	0.08
DSB0J336⌈⌋1S	33	MK	2.0	0.08
DSB0J476⌈⌋1S	47	ML	2.9	0.08
DSB0J686⌈⌋1S	68	MM	4.2	0.08
4 V Rating				
DSB0G225⌈⌋1S	2.2	MB	0.5	0.06
DSB0G335⌈⌋1S	3.3	MC	0.5	0.06
DSB0G475⌈⌋1S	4.7	MD	0.5	0.06
DSB0G685⌈⌋1S	6.8	ME	0.5	0.06
DSB0G106⌈⌋1S	10	MF	0.5	0.08
DSB0G156⌈⌋1S	15	MG	0.6	0.08
DSB0G226⌈⌋1S	22	MH	0.8	0.08
DSB0G336⌈⌋1S	33	MJ	1.3	0.08
DSB0G476⌈⌋1S	47	MK	1.8	0.08
DSB0G686⌈⌋1S	68	ML	2.7	0.08
DSB0G107⌈⌋1S	100	MM	4.0	0.10

NOTES : In the ⌈⌋, capacitance tolerance, will be coded by the part number system.