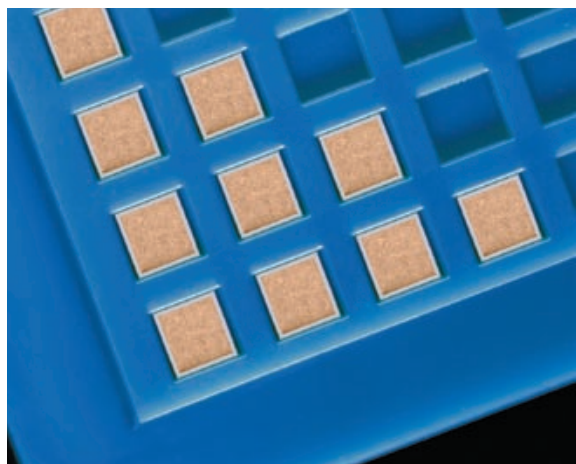
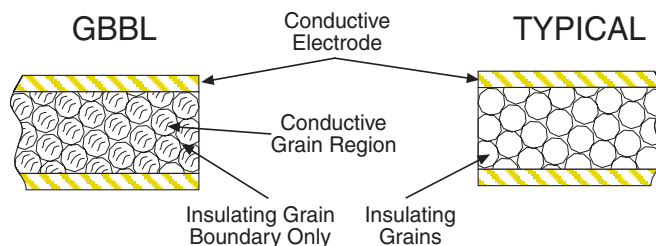


GBBL BROADBAND SINGLE LAYER CAPACITORS



KEY FEATURES

- GBBL Dielectric Yields High Volumetric Efficiency
- Stable Temperature Coefficient: $\pm 15\%$ Max (-55°C to 125°C)
- Reduced Microphonics
- Offered With or Without Borders
- Thin Film TiW/Au or TiW/Ni/Au Electrodes

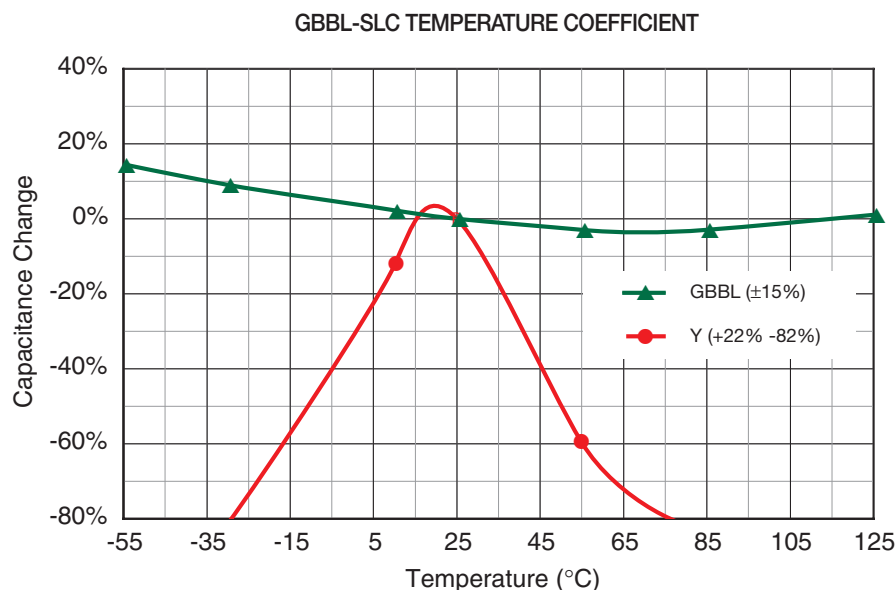


Johanson Technology's new "GBBL" microwave capacitor features high capacitance per case size without sacrificing the temperature stability associated with high dielectric constant materials. GBBL capacitors feature a proprietary X7R composition which is manufactured by a two step, atmospheric controlled sintering process. The resulting micro-structure is composed of a conducting titanate ceramic grain in contact with an insulating Grain Boundary Layer (GBBL). The insulating boundary layer acts as a very thin dielectric. The process control of the boundary thickness, in conjunction with the conductive grain size, provides the cumulative effect of a very high, yet stable, dielectric constant.

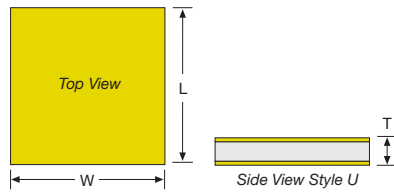
DIELECTRIC CHARACTERISTICS

TEMPERATURE COEFFICIENT: $\pm 15\%$, -55 to 125°C
VOLTAGE RATING: 16 - 50 VDC
DISSIPATION FACTOR: .025 (2.5%) max
AVAILABLE CAPACITANCE: 68 pF - 0.01 μF

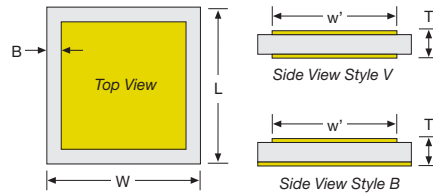
DIELECTRIC STRENGTH: 2.5 X WVDC Min., 50 mA max
TEST PARAMETERS: 1kHz $\pm 50\text{Hz}$, 1.0 ± 0.2 VRMS, 25°C
INSULATION RESISTANCE: 10,000 M Ω Typ.



SIZE & CAPACITANCE SELECTION



Border Style "U" Configuration



Border Style "V" & "B" Configuration

BORDER	U	V, B	U	V, B	U	V, B	U	V, B	U	V, B	U	V, B
SIZE	01		02		03		04		05		06	
W In (mm)	.015 ±.005 (0.38 ±.13)		.025 ±.005 (0.64 ±.13)		.035 ±.005 (0.89 ±.13)		.050 ±.010 (1.27 ±.25)		.070 ±.010 (1.78 ±.25)		.090 ±.010 (2.29 ±.25)	
L In (mm)	.015 ±.005 (0.38 ±.13)		.025 ±.005 (0.64 ±.13)		.035 ±.005 (0.89 ±.13)		.050 ±.010 (1.27 ±.25)		.070 ±.010 (1.78 ±.25)		.090 ±.010 (2.29 ±.25)	
T In (mm)	.007 ±.002 (0.18 ±.05)		.007 ±.002 (0.18 ±.05)		.007 ±.002 (0.18 ±.05)		.007 ±.002 (0.18 ±.05)		.007 ±.002 (0.18 ±.05)		.007 ±.002 (0.18 ±.05)	
B In (mm)	n/a	.002±.001" (0.05±.03)	n/a	.002±.001" (0.05±.03)	n/a	.002±.001" (0.05±.03)	n/a	.002±.001" (0.05±.03)	n/a	.002±.001" (0.05±.03)	n/a	.002±.001" (0.05±.03)
Capacitance pF Code	U01	V01 B01	U02	V02 B02	U03	V03 B03	U04	V04 B04	U05	V05 B05	U06	V06 B06
75 750	50V	50V										
82 820	50V	50V										
100 101	50V	50V										
120 121	50V	50V										
150 151	50V	50V										
220 221	25V	25V										
270 271	25V	16V		50V								
330 331	16V	16V	50V	50V								
390 391	16V	16V	50V	50V								
470 471	16V		50V	25V								
560 561			25V	25V								
680 681			25V	16V		50V						
750 751			16V	16V	50V	50V						
820 821			16V	16V	50V	25V						
1000 102			16V	16V	25V	25V						
1200 122			16V		25V	16V		50V				
1500 152					16V	16V	50V	50V				
1800 182					16V	16V	50V	25V				
2200 222					16V		25V	25V		50V		
2700 272							25V	16V	50V	50V		
3300 332							16V	16V	50V	25V		
3900 392							16V		25V	25V		50V
4700 472									25V	16V	50V	50V
5600 562									16V	16V	50V	25V
6300 632									16V		25V	25V
7500 752											16V	16V
8200 822											16V	16V
.01 103											16V	

HOW TO ORDER GBL-SLCs

250 VOLTAGE CODE 500 = 50 V 250 = 25 V 160 = 16 V	V BORDER STYLE U = No Border V = Dual Border B = Single Border	02 CASE SIZE See Size Chart	A DIELECTRIC A = GBL Dielectric	471 CAPACITANCE 1st two digits are significant; third digit denotes number of zeros. 101 = 100 pF 471 = 470 pF 122 = 1200 pF	K TOLERANCE K = ±10% M = ±20% Z = +20% -80%	N TERMINATION N = TiW/Ni/Au T = TiW/Au MARKING 4 = No mark	4 PACKAGING S = Vial Pack / Bulk W = Conductive Waffle Trays	W
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