

## MIS CHIP CAPACITORS

Part Number	Capacitance (± 20%, pF)	Chip Type
TCCXXX4A	0.2 ~ 4.5	A
TCCXXX4B	0.6 ~ 13	B
TCCXXX4C	3 ~ 50	C
TCCXXX4D	1.6 ~ 30	D
TCCXXX4E	55 ~ 550	E
TCCXXX4F	1 ~ 20	F
TCCXXX4G	8 ~ 110	G
TCCXXX4H	0.2 ~ 3.7	H
TCCXXX4I	2 ~ 27	I
TCCXXX4Q	45 ~ 450	Q
TCCXXX4S	15 ~ 155	S

**Note :** The specified capacitors on this list are not limited to Transcom’s capability for MIS chip capacitors. Any capacitance or chip type not listed here, pls contact Transcom for further information!  
 Thanks!

### DIE ATTACH AND WIRE BONDING

Transcom’s MIS chip capacitors are processed with a high quality gold metallization for thermo-compression, thermo-sonic or ultrasonic wire bonding. The top plate of the capacitors is 99.99% sputtered gold with a TiW barrier and typical 3 μm of Au which is suitable for Gold-tin or gold germanium eutectic solders. Epoxy die attach is also acceptable.

### DESCRIPTION

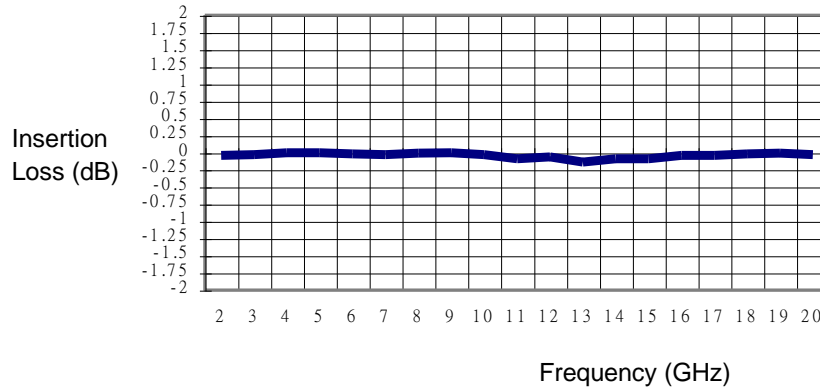
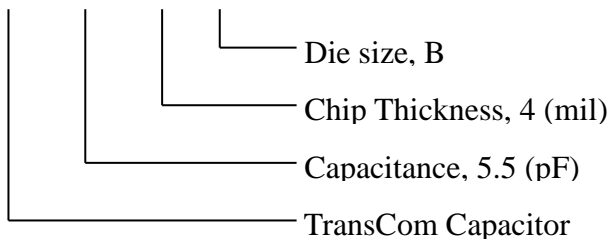
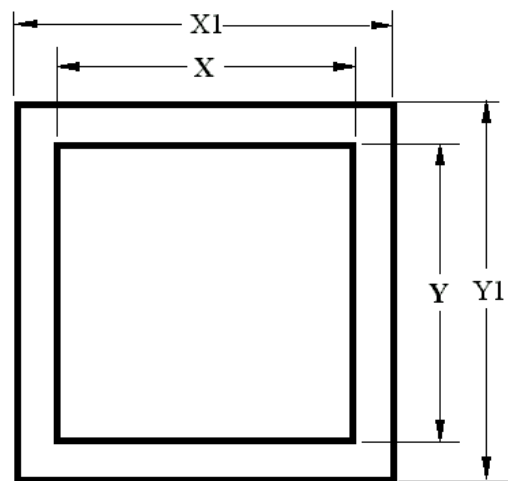
Transcom’s MIS Chip Capacitors are available in a wide range of sizes and capacitance values. They are designed to be used as DC blocks coupling filter elements, RF bypass, microwave circuit resonant elements and a fixed capacitance tuning elements in filters, oscillators, and matching networks.

**The devices have long term stability making them suitable for high reliability application. The temperature coefficient is less than 200 ppm/°C, and operation is suitable from –65 °C to 200 °C. Differing from ceramic capacitors, Transcom’s MIS Chip Capacitors have high Q and lower insertion loss of 0.1 dB in a 50 Ω system.**

**Insulation resistance is greater than 10<sup>6</sup> MΩ.**The wafers are supplied on expanded 6” hoop for high volume automated assembly methods and 100% DC tested to assure consistent quality. Capacitors are packaged in gel packs and 100% visual inspection is always available if required.

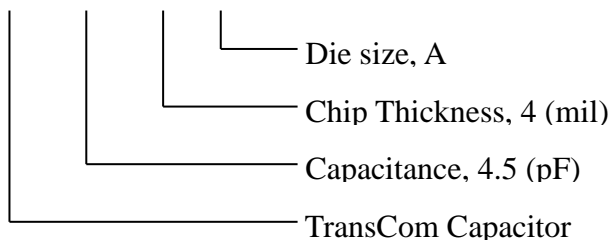
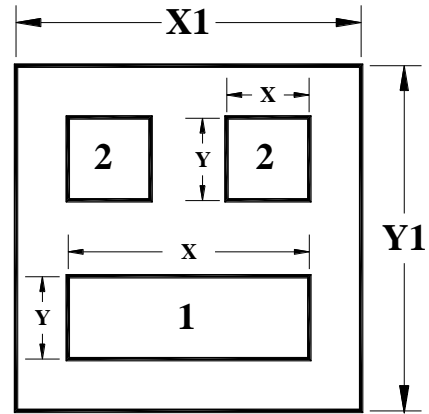
### ELECTRICAL SPECIFICATIONS

Capacitance Range..... 0.2 to 550 pF  
 Capacitance Thickness..... 0.004” ± 0.001”  
 Capacitance Tolerance ..... ± 20%  
 Operating temperature .....-65 °C to 200 °C  
 Temperature Coefficient ..... 50 ppm/°C Typical  
 Dielectric Withstanding Voltage ..... 50 V Typical  
 Insulation Resistance .....10<sup>6</sup> Megohms Typical  
 Leakage Current..... Typical  
 ROHS Status.....Compliant

**TYPICAL INSERTION LOSS VS. FREQUENCY (50 pF on 50 ohm system)**

**PART NUMBER INFORMATION**
**TCC 0055 4 B**

**OUTLINE DRAWINGS (Unit in Mils)**

**DIMENSIONS IN MILS**

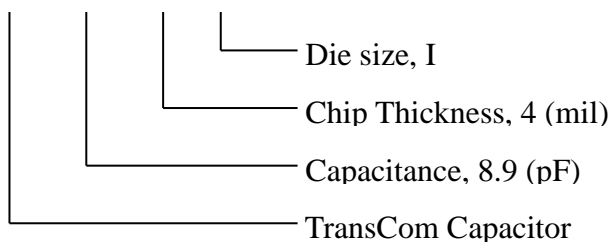
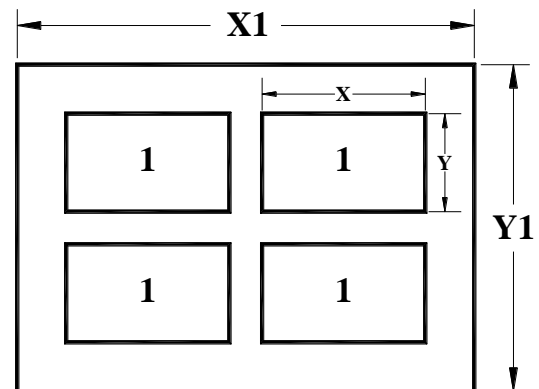
Outline	B	C	D	E	F	G	K	Q	S
<b>X</b>	7	7	11	47	9	21	15	56	36
<b>X1</b>	11	11	14	51	13	25	18	61	41
<b>Y</b>	7	27	11	47	9	21	15	31	18
<b>Y1</b>	11	31	14	51	13	25	18	36	23

 X1, Y1 Tolerance:  $\pm 0.5$  mil

**PART NUMBER INFORMATION**
**TCC 0045 4 A**

**OUTLINE DRAWINGS (Unit in Mils)**

**DIMENSIONS IN MILS**

Outline	A		I	
	1	(2)	1	(2)
<b>X</b>	7	(2.4)	16	(7)
<b>X1</b>	11		21	
<b>Y</b>	2.4	(2.4)	7	(7)
<b>Y1</b>	11		21	

X1, Y1 Tolerance: +1 mil

**PART NUMBER INFORMATION**
**TCC 0089 4 H**

**OUTLINE DRAWINGS (Unit in Mils)**

**DIMENSIONS IN MILS**

Outline	H
<b>X</b>	5
<b>X1</b>	15
<b>Y</b>	3
<b>Y1</b>	11

X1, Y1 Tolerance: ± 0.5 mil