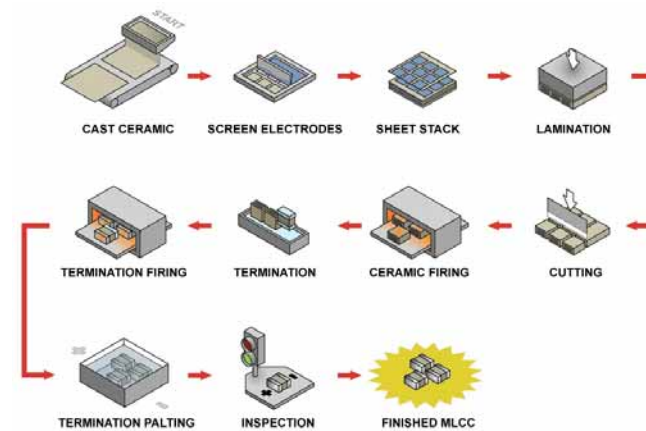
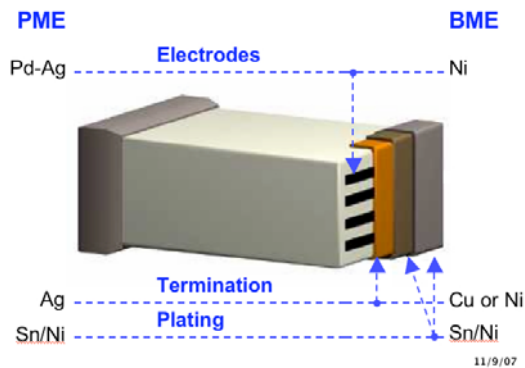


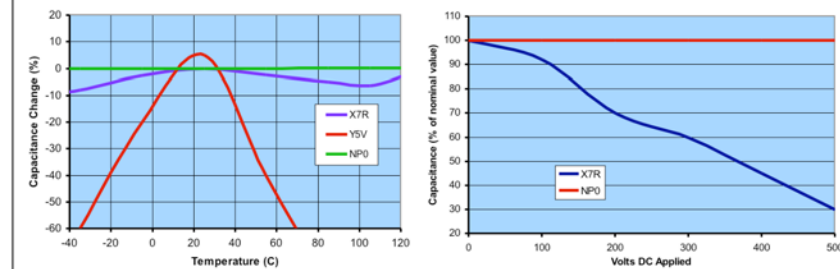
Introduction to X2Y[®] Capacitors

X2Y vs Conventional MLCC

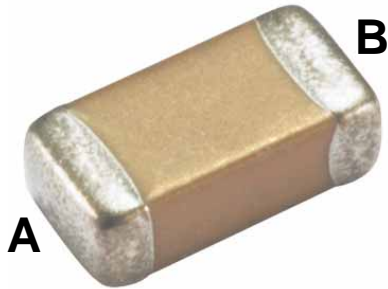
Same materials, manufacturing process, basic ceramic specs



Dielectric	Constant (k)	Temp. Range	Cap. Change	DF
NP0	15-100	-55 to 125C	< 0.4%	0.10%
X7R	2,000-4,000	-55 to 125C	+/-15%	3.50%
X5R	8,000-10,000	-55 to 85C	+/-15%	5.00%
Y5V	>16,000	-30 to 85C	Up to 82%	9.00%



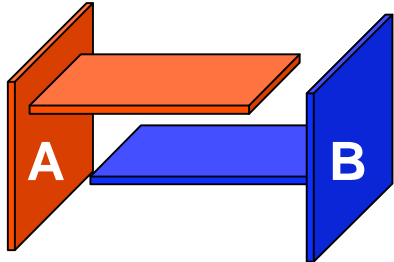
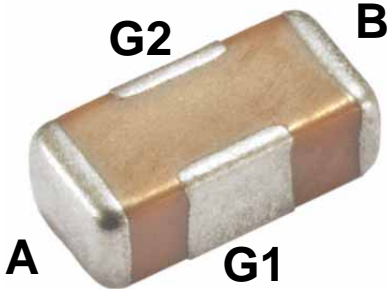
Internal Design



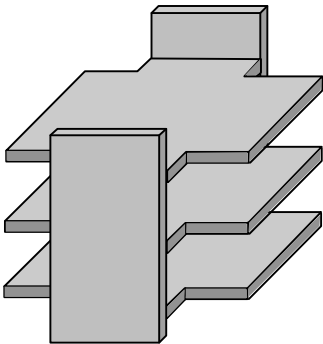
MLCC

vs

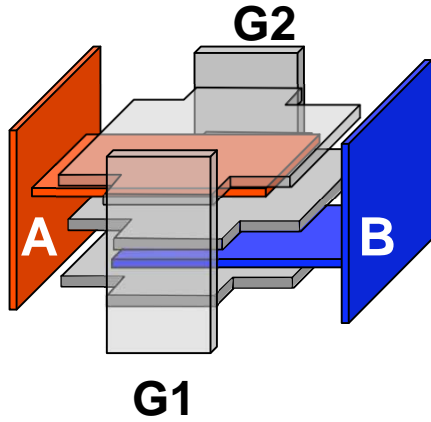
X2Y[®]



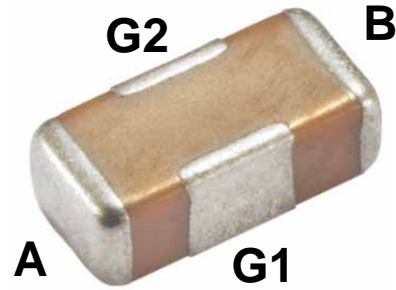
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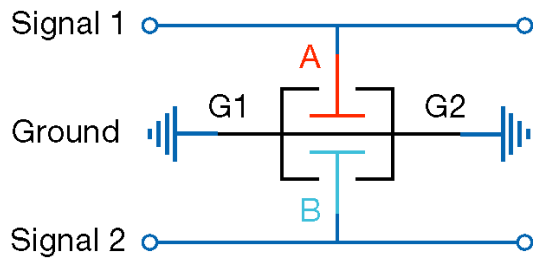
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X2Y: A Versatile Component

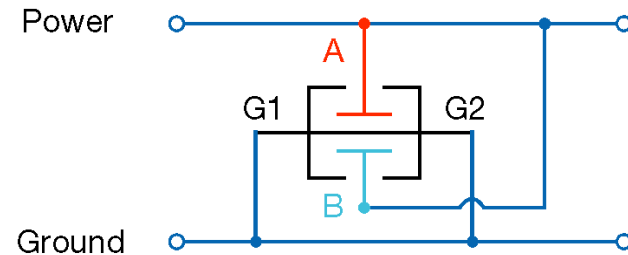


BALANCED CIRCUIT for Filtering



Circuit 1

LOW ESL for IC Power Bypass



Circuit 2