Transmission Line MIM Capacitor

(Metal-Insulator-Metal)





GENERAL DESCRIPTION

Thin Film Technologies is pleased to introduce a novel MIM (Metal-Insulator-Metal) capacitor using a transmission line wire bond pad structure with backside ground.

The TL MIM can be supplied on quartz, alumina, glass and other substrates to minimize losses. Copper traces are used for optimal conductivity. Front and backside gold metalization make this device suitable epoxy, gold wire bond/ribbon bond attachments.

BENEFITS

- · HFSS Design Unique for every device
- Gold Wirebondable
- · Copper Conductor Design for improved Circuit Conductivity
- Designs Optimized for RF/Performance
- ROHS Compliant

SUBSTRATE MATERIALS

- Alumina (Al₂O₃)
- Quartz

CAPACITOR MATERIALS

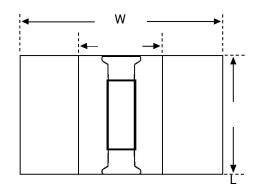
RF Microwave applications

Rated Voltage	Specific Capacitance	ecific Capacitance Dissipation Factor	
<100	50 - 100 * pf/mm2	<0.1%	±60

*Actual maximum capacitance values depend on transmission line dimensions

MECHANICAL DIMENSIONS

Based on Transmission Line Design Request



Length is determined by transmission line

TEST METHODS

APPLICATIONS

DC Blocking at UHFHigh Frequency Link

•

Specification		Limit
MIL-STD-883-2011.10	BOND STRENGTH	> 3 gm min. w/0.001" Au Wire
MIL-STD-883-2019.10	SHEAR STRENGTH	Size Dependent See Procedure
MIL-STD-202-108	LIFE	1000 hrs @ 125°C

30



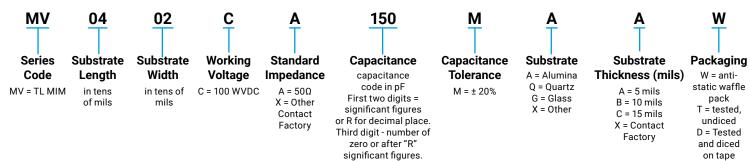
GENERAL CHARACTERISTICS

CHARACTERISTIC	DESIGN DEPENDENT		
Capacitor Range	0.3 - 15 pF (typical)		
Tolerance	± 20%		
Backing	Gold Metalization		
Termination Type	Gold Wire Bond		

AVAILABLE PART NUMBERS

Part Number	Substrate	Length (mils)	Width (mils)	Thickness (mils)	Cap Value (pF)
MV0304CA150MABW	Alumina	30	40	10	15
MV0402CA150MAAW	Alumina	40	20	5	15
MV0802CA150MAAW	Alumina	80	20	5	15
MV0804CA1R0MABW	Alumina	80	40	10	1
MV0804CA150MABW	Alumina	80	40	10	15
MV3204CA150MABW	Alumina	120	40	10	15
MV0404CA150MABW	Alumina	40	40	10	15
MV0505CA150MQAW	Quartz	50	50	5	15

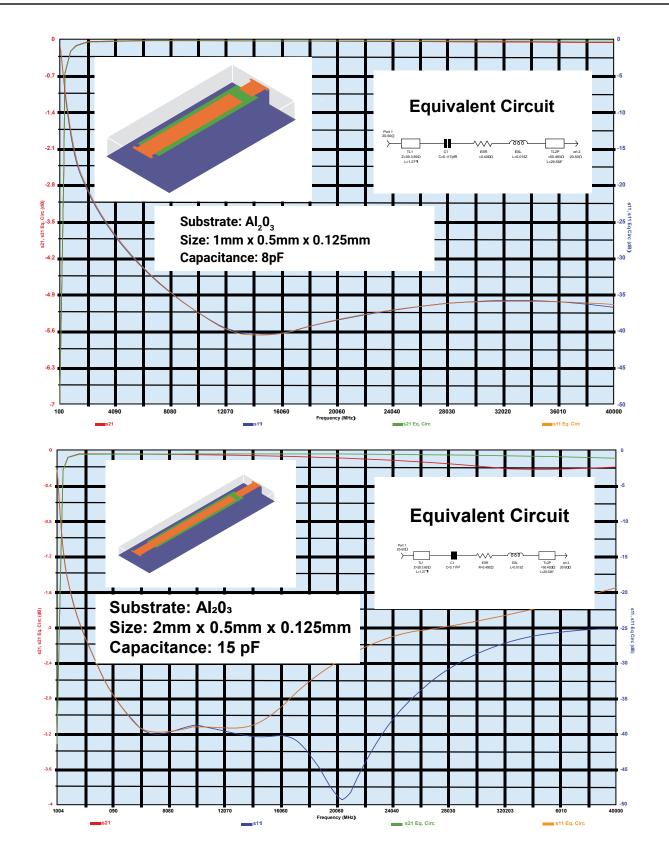
HOW TO ORDER



KUDEERA The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

Transmission Line MIM Capacitor (Metal-Insulator-Metal)





The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

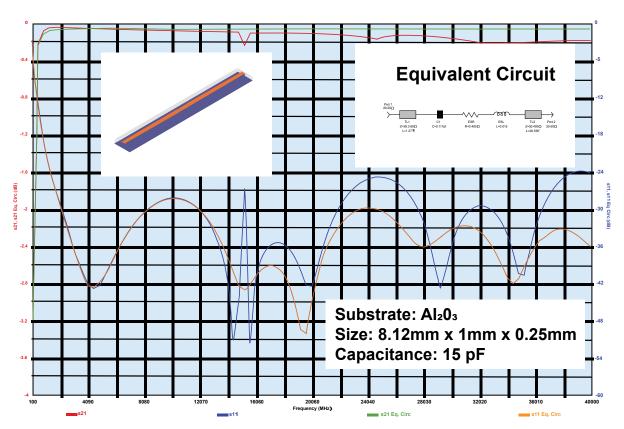
32

052219

Transmission Line MIM Capacitor

(Metal-Insulator-Metal)





KUCERE The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.