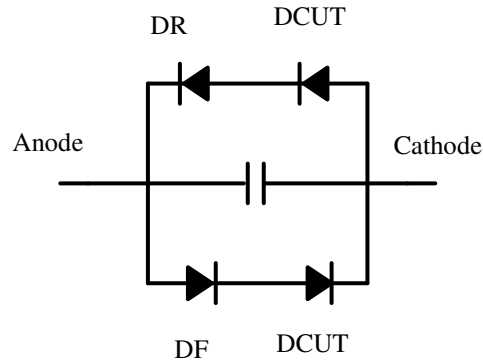


## Spice Model for Metelics Zero Bias Schottky Diodes

The standard diode model found in Spice (Ver 2) does not correctly model the characteristics of Metelics' Zero Bias Schottky diodes. To correct this problem, use the macromodel shown below. Model does not include package parasitics.



Macromodel for MSS20,046

```
.SUBCKT ZB_SCH 1 2      1 is Anode  2 is Cathode
D1 4 1 DR
D2 2 4 DCUT
D3 1 3 DF
D4 3 2 DCUT
CJ 1 2 0.1PF
.MODEL DR D (N=0.09 RS=950 IS=5E-4)
.MODEL DF D (IS=19E-6 N=1 RS=94)
.MODEL DCUT D (N=0.01 RS=0.001 IS=7E-7)
.ENDS
```

Example circuit using macromodel

```
.DC V1 0.0 .3 .05
.PRINT DC V(2)
V1 1 0 0
R1 1 2 1000
X1 2 0 ZB_SCH
.SUBCKT ZB_SCH 1 2
D1 4 1 DR
D2 2 4 DCUT
D3 1 3 DF
D4 3 2 DCUT
CJ 1 2 0.1PF
.MODEL DR D (N=0.09 RS=950 IS=5E-4)
.MODEL DF D (IS=19E-6 N=1 RS=94)
.MODEL DCUT D (N=0.01 RS=0.001 IS=7E-7)
.ENDS
.END
```

Values for CJO	
Part Number	CJO
MSS-20,046	0.10PF
MSS-20,047	0.10PF
MSS-20,050	0.15PF
MSS-20,051	0.15PF
MSS-20,140	0.08PF
MSS-20,141	0.08PF
MSS-20,142	0.10PF
MSS-20,143	0.10PF
MSS-20,145	0.12PF
MSS-20,146	0.12PF

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