Fundamental_"Harmonic"

V1
Signal_Har.
SINE(0 5 10000 0 0 0 0)

R1
10

.tran 0 .001 0 1

V2
Signal_Inj.
SINE(0 5 10000 0 0 180 0)

R2
10

Injected_"Harmonic"

HELIX

R3
49.9

I1

D1
1N5817

HVPS_Ground_Return

Helix_Current_Sense_Circuit

D2
1N5817

V3
5000
+

R4
324K

LEGEND:
I1 – helix current (green trace, read on mA scale)
V1 – harmonic of fundamental signal (blue trace)
V2 – injected "harmonic" signal (red trace)
V3 – TWT beam voltage
R1 and **R2** – required signal source loads
R3 – helix and helix-to-ground resistance
R4 – sets desired beam intercept current
D1 – HVPS ground DC return path
D2 – Blocks V3 current through signal sources