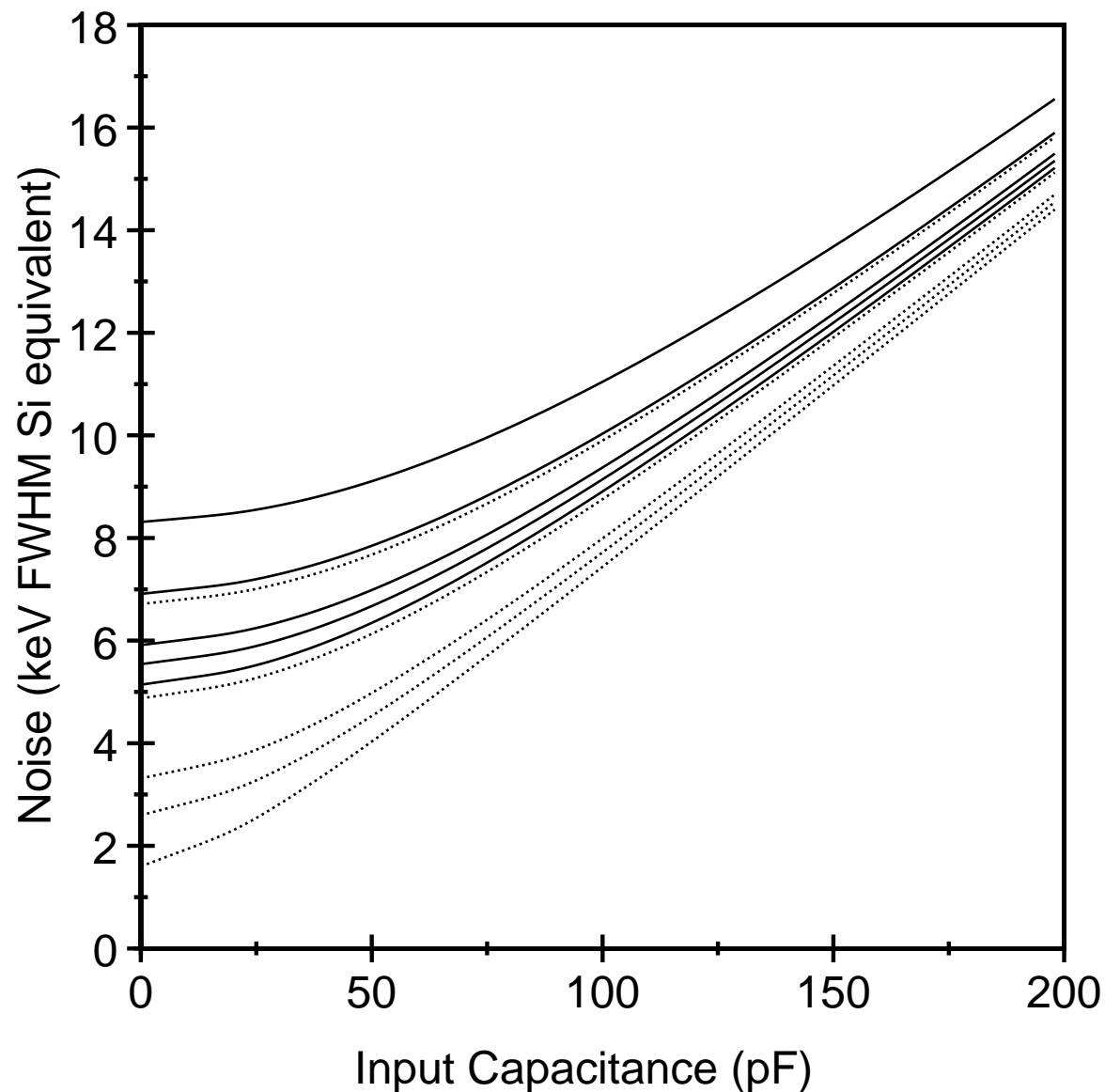


# Calculated Noise versus $C_D$ and $I_D$

Dotted Lines – RAL108 Preamplifier Noise Only

Solid Lines – RAL108 Preamplifier + RAL109 Amplifier Noise



$g_m$  16mA/V (323K)

$C_s$  15pF

$R_f$  22.7M $\Omega$  (323K)

$R_b$  22.7M $\Omega$  (298K)

$I_D$  0, 10, 20, 50, 100nA

Shaping CR-RC ( $\tau = RC$ ) 0.5 $\mu$ s

RAL109 Amplifier Noise 4.9keV FWHM