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## FastSDD X-Ray Detectors for XRF/EDS

FAST SDD® Ultra High Performance Silicon Drift Detector (/products/x-ray-detectors/fast-sdd-x-ray-detectors-for-xrf-eds/fast-sdd-silicon-drift-detector)

Patented C-Series Low Energy X-Ray Windows (/products/x-ray-detectors/fast-sdd-x-ray-detectors-for-xrf-eds/c-series-low-energy-x-ray-windows)

EDS (SEM) Applications FAST SDD® and C2 Window (/products/x-ray-detectors/fast-sdd-x-ray-detectors-for-xrf-eds/eds-sem-applications-with-c2-window)

### EDS (SEM) Applications FAST SDD® and C2 Window

Amptek is pleased to offer our improved line of silicon drift detectors (SDDs) for energy dispersive spectroscopy (EDS) use within scanning electron microscopes (SEMs). Using our proprietary Patented “C-Series” silicon nitride ( $\text{Si}_3\text{N}_4$ ) X-ray windows, the low-energy response of our FAST SDD® extends down to beryllium (Be). The FAST SDD® with its high intrinsic efficiency is ideal for EDS, which is also known as energy dispersive X-ray spectroscopy (EDX or XEDS) and energy dispersive X-ray analysis (EDXA) or energy dispersive X-ray microanalysis (EDXMA).

Systems include:

- FAST SDD® –  $225\text{ mm}$  or  $270\text{ mm}$
- X-123 package with digital pulse processor and all power supplies
- Vacuum extender – 5 or 9 inches
- Vacuum flange



Figure 1. The X-123 FAST SDD® spectrometer with C2 window, vacuum extender, and feedthrough coupling.

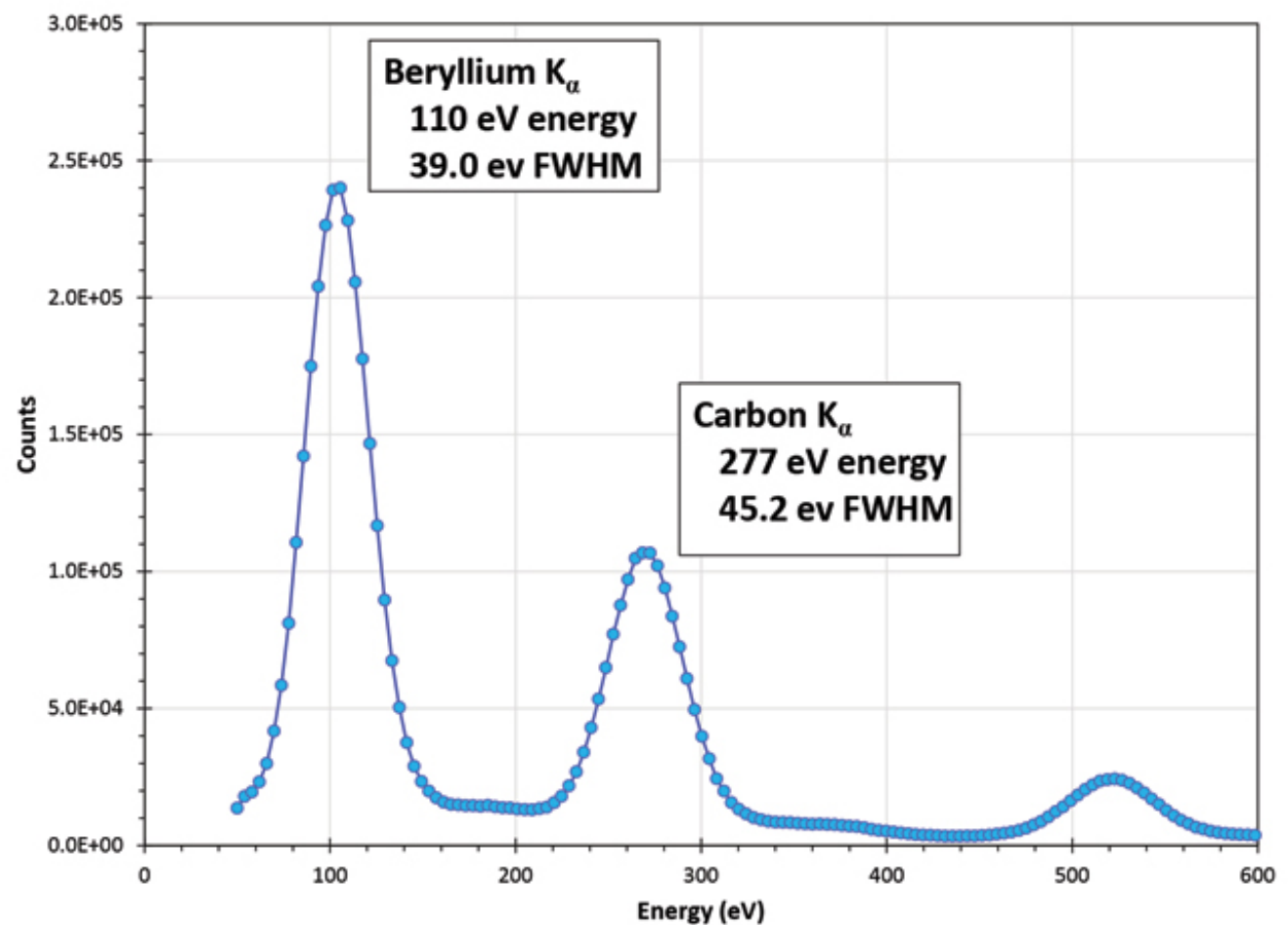


Figure 3. Beryllium (Be) and Carbon (C) spectrum with new Fast SDD® detector with C2 Window.

## C2 Window Transmission Efficiency

C2 Window

Element	Transmission
Li	29%
Be	13%
B	19.7%
C	43.9%
N	59.2%
O	62%
F	69%
Ne	72.9%
Na	75.1%
Mg	77.3%
Al	80.3%
Si	81.8%

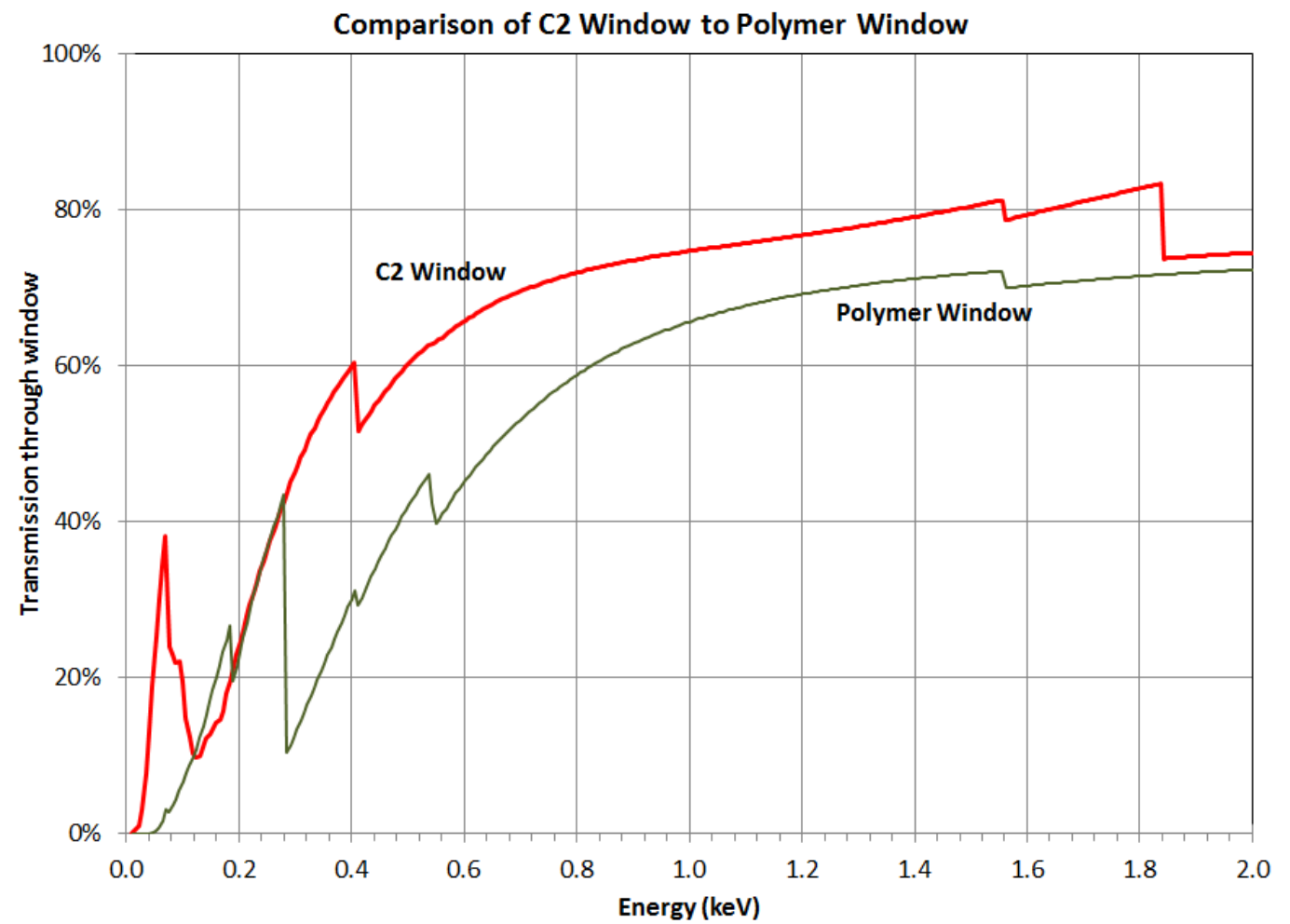


Figure 5. C2 Window vs. polymer window.

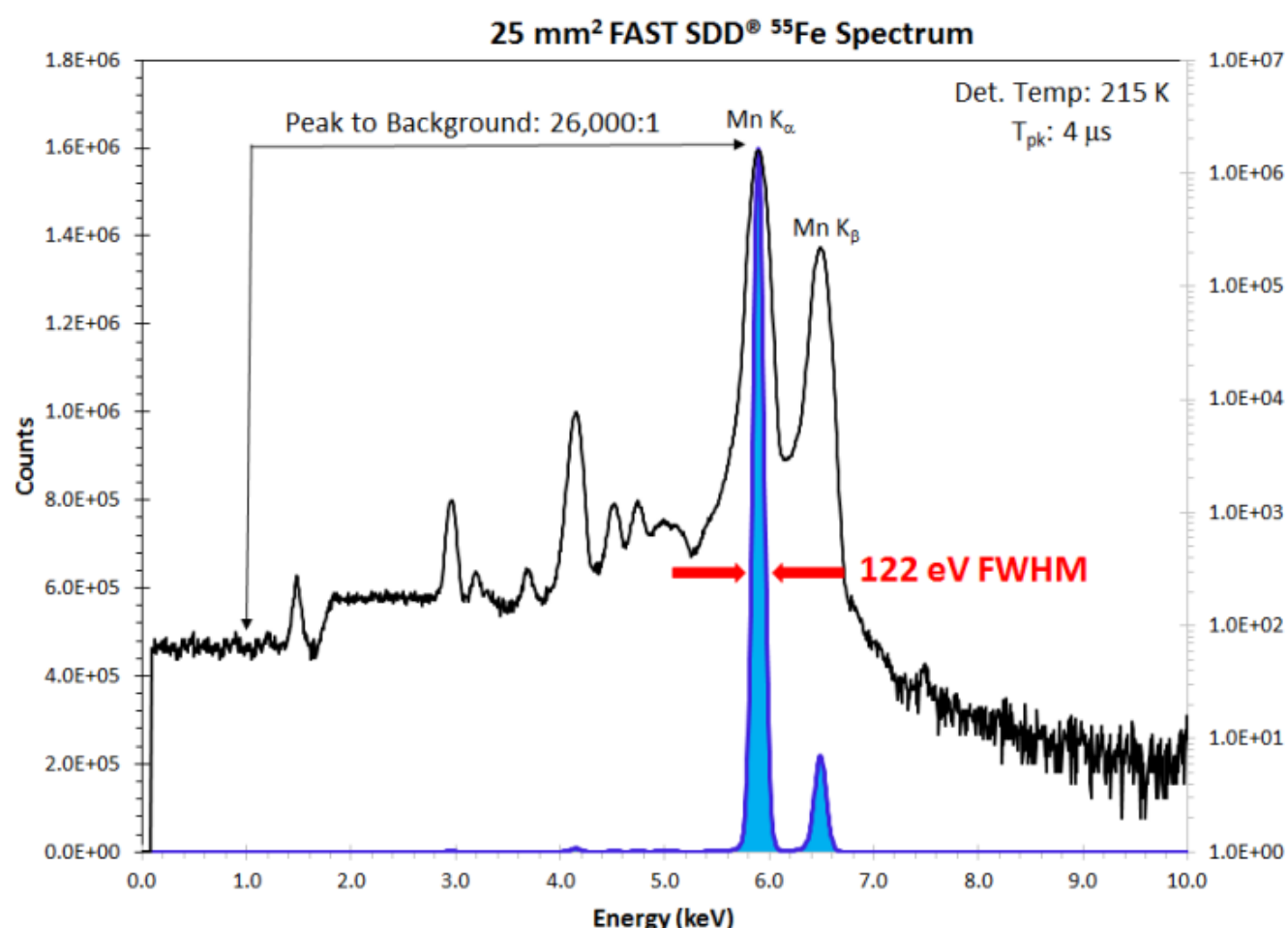


Figure 6. FAST SDD® <sup>55</sup>Fe Spectrum.

- Learn more about the FAST SDD®
- Learn more about our Patented C Series low energy windows
- FAST SDD®<sup>2</sup> Available with the 70 mm

**Contact us for more information today! ([/contact-us/contact-us](#))**  
**([/contact-us](#))**

All results on this page are typical performance values at full cooling; please **Contact Us** ([/contact-us/contact-us](#)) to discuss guaranteed performance under different operating conditions. Specifications subject to change without notice. The C2 window is NOT He tight. Do not put it in He purge. It will destroy the vacuum and void warranty.

## PRODUCTS

X-Ray Detectors ([/products/x-ray-detectors](#))

X-Ray Sources ([/products/x-ray-sources](#))

Digital Pulse Processors ([/products/digital-pulse-processors](#))

Gamma Ray Products ([/products/gamma-ray-products](#))

Multichannel Analyzers (MCA) ([/products/multichannel-analyzers](#))

EXP-2 Complete XRF Experimenter's Kit

## SOFTWARE

DP5 Digital Pulse Processor Based Software ([/software/dp5-digital-pulse-processor-software](#))

Mini-X2 X-Ray Tube Software ([/software/mini-x2-x-ray-tube-software-2](#))

Analytical Software ([/software/analytical-software](#))

Legacy Software Download Page ([/software/legacy-software-downloads](#))

## RESOURCES

Application Notes ([/resources/application-notes](#))

Tutorials ([/resources/tutorials](#))

Webinars ([/resources/webinars](#))

Specifications in PDF ([/resources/specifications-in-pdf](#))

Detector & Window Development ([/resources/detector-window-development](#))

What is XRF? ([/resources/xrf](#))

Periodic Table and X-Ray Emission Line Lookup Chart

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