



AHEAD OF WHAT'S POSSIBLE™

**2M Thick with old Poly (BL130) to
2M Thick with new Poly (8124ER)**

**Sine Wave HVE Characterization @
85C & 85%RH**

RELIABILITY GROUP

07/07/2016

Analog Devices Confidential Information—not for external distribution



HVE Testing Details

▶ Test Vehicles:

- (Lot #AK15389.7 and DC 1429) → 2M Thick with BL130 Polyimide
- (Lot #3355863.1 and DC 1552) → 2M Thick with 8124ER Polyimide

▶ Sine wave HVE Testing

▶ Temp = +85C and 85%RH

▶ Stress Voltages: 3kVac, 2.5kVac, 2.0kVac, 1.5kVac and 1kVac

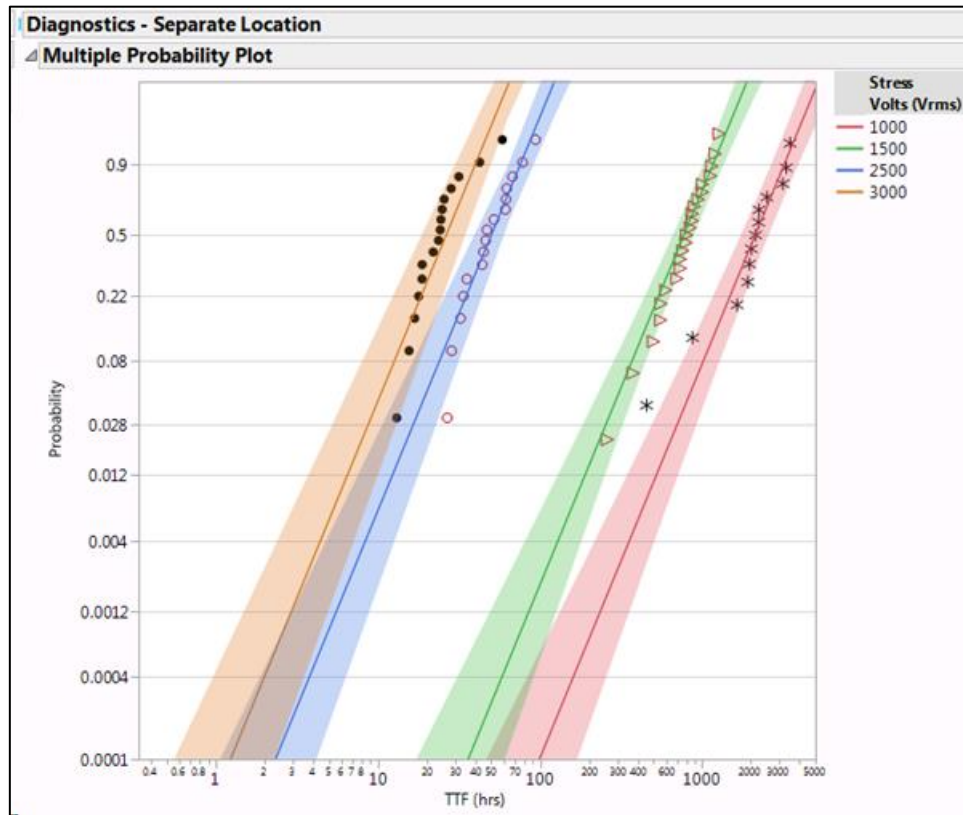
▶ 23 units per stress voltage

▶ Package: 20L SOIC_W

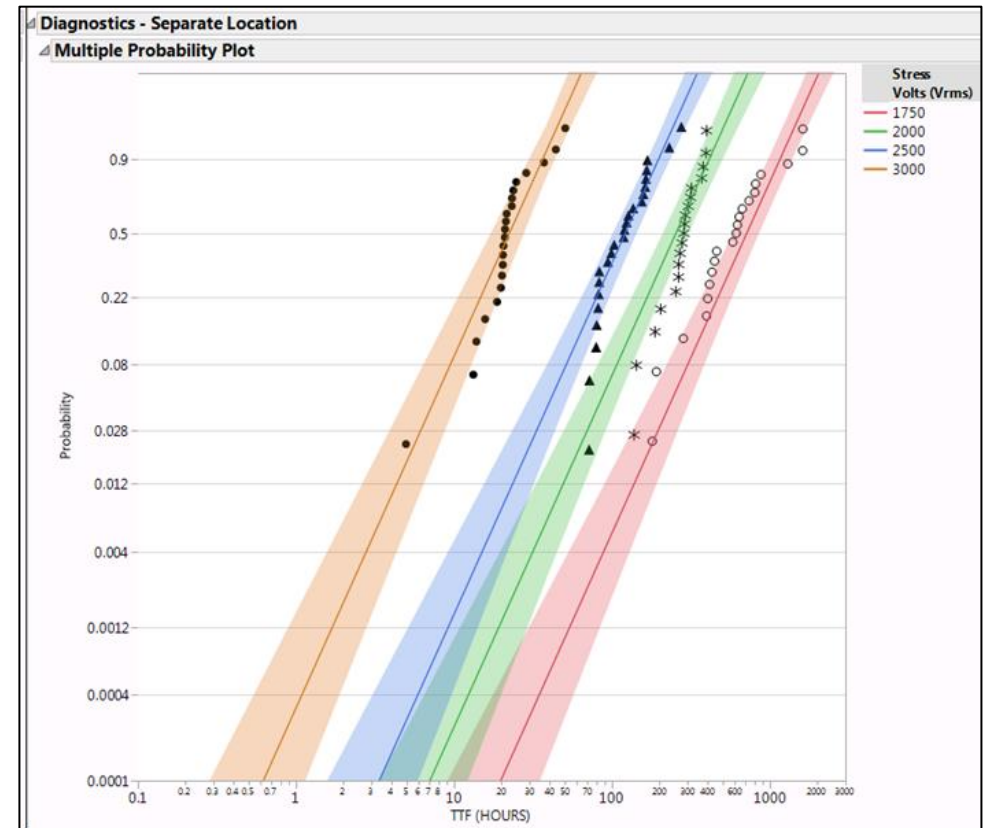
▶ **Maximum Continuous Working Voltage Supporting a 50-Year: 400Vrms (per datasheet)**

Raw Weibull Distributions

Old Polyimide BL130

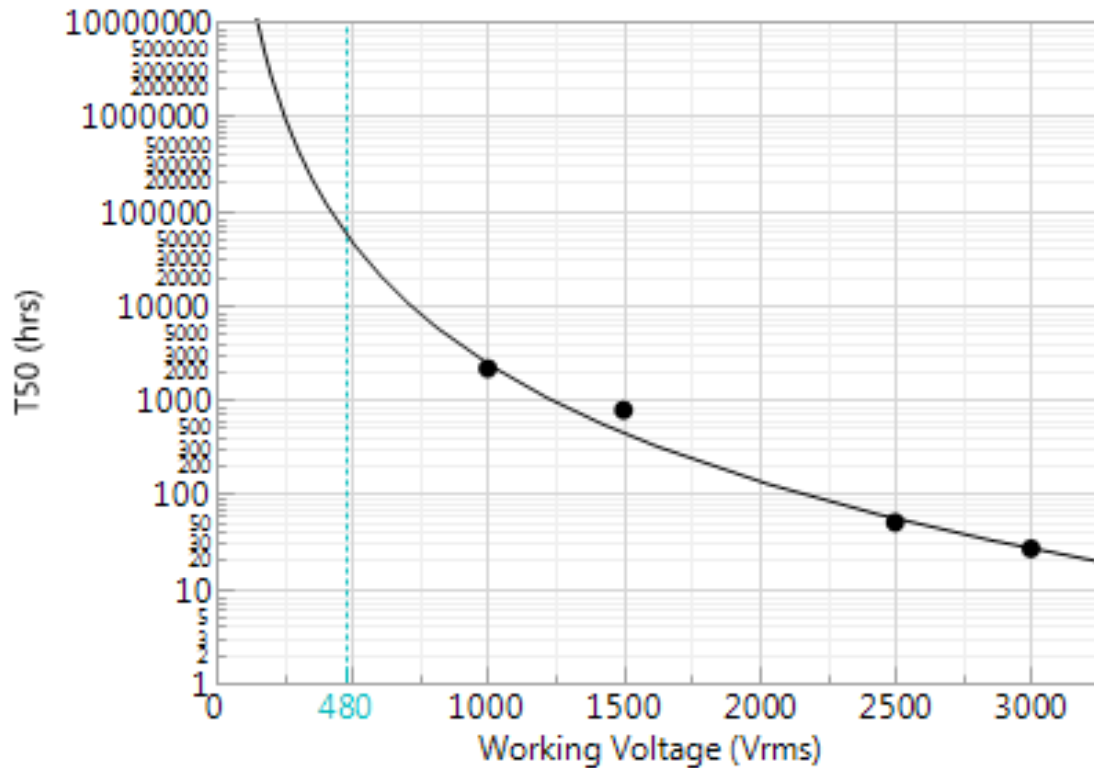


New Polyimide 8124ER

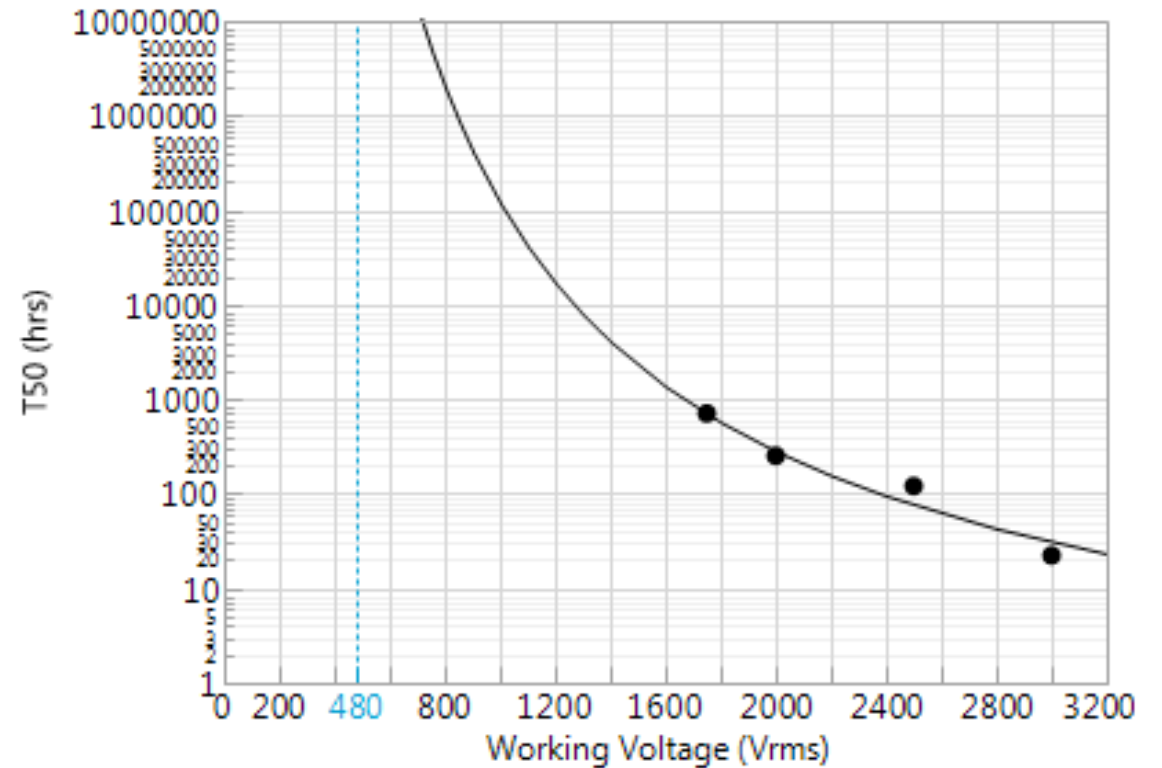


T50 Lifetime Curve (1/Y² Weight)

Old Polyimide BL130

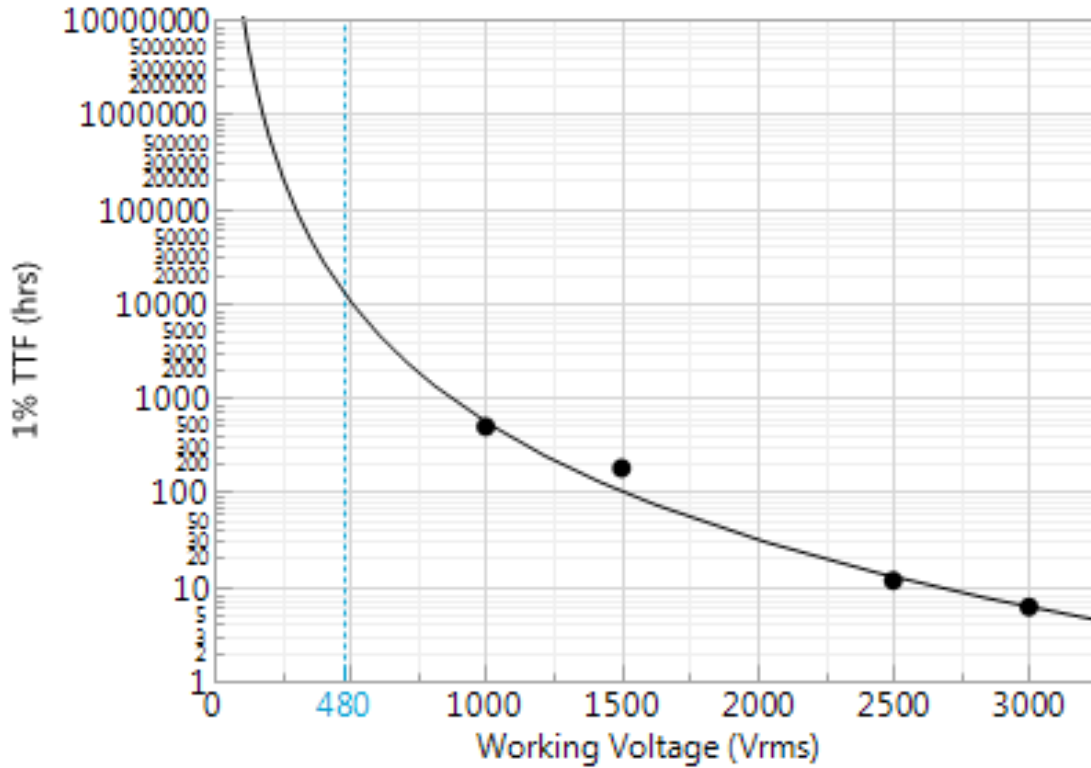


New Polyimide 8124ER

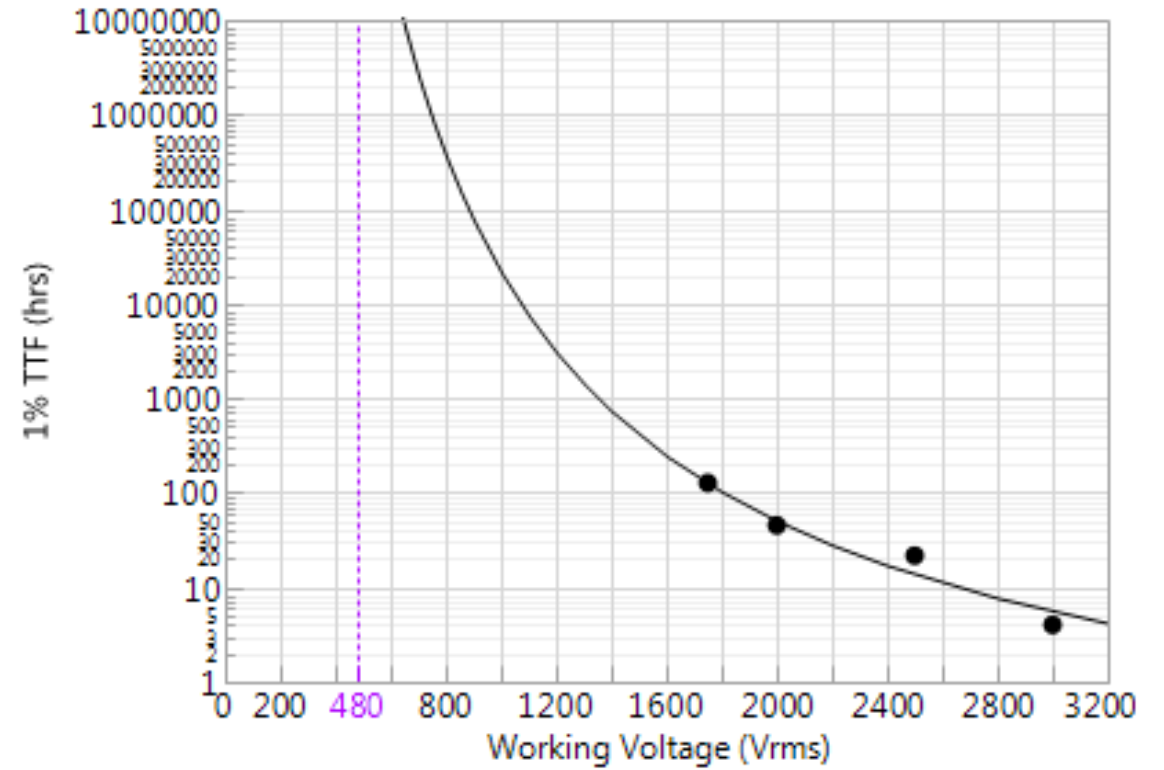


1% TTF Lifetime Curve (1/Y² Weight)

Old Polyimide BL130

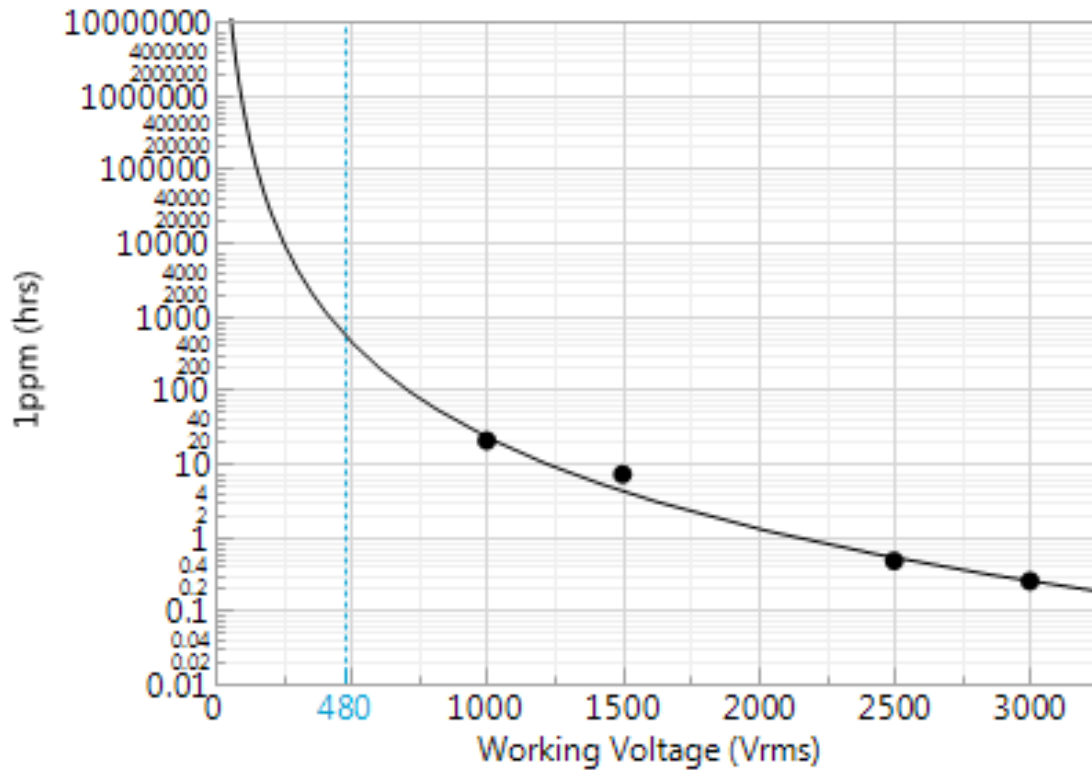


New Polyimide 8124ER

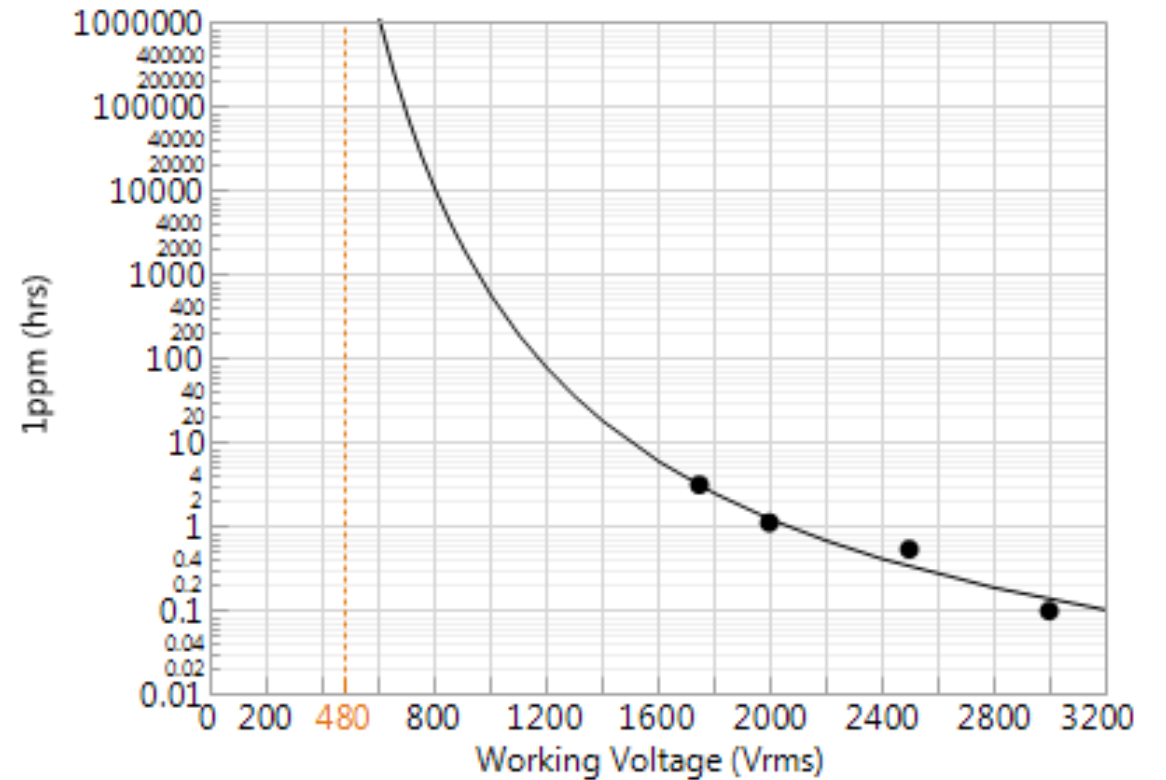


1ppm Lifetime Curve (1/Y² Weight)

Old Polyimide BL130



New Polyimide 8124ER



New Polyimide 8124ER – Combined Lifetime Curves

