PERFORMANCE CHECKSHEET

Model: AVR-EBF6-B-FTA
Type: Forward Recovery Test System
S.N.: 13265
Date: March 9, 2015

Basic specifications: →

Output Amplitude: 10 mA to 1 A
Pulse Width (FWHM): 200 ns to 10 us
Rise Time (10%-90%): 10 or 20 ns (depending on the filter used)
PRF: 1 Hz - 10 kHz
Jitter, Stability: OK
Prime Power: 100-240V AC, 50-60 Hz.

Test Waveforms

High Current Test, 1N5819

DUT = 1N5819 (an axial device, soldered onto the SOT23B daughterboard)

Top waveform: MON output (V_{IN}/10, +50V, with ~10 ns rise time). 2 V/div, 10 ns/div.

Bottom waveform: Main output (V_{DUT}/10). 50 mV/div, 10 ns/div.

Shows V_{FM} = 1.435V, and t_{FR} = 18.6 ns for I_{F} = 1A, using the recovery point 10% above steady state.

Tested using the AVX-TFR-SOT23B test jig and the AVX-FILT-10NS filter.

Low Current Test, 1N5819

DUT = 1N5819 (an axial device, soldered onto the SOT23B daughterboard)

Top waveform: MON output (V_{IN}/10, +0.5V, with ~20 ns rise time). 20 mV/div, 20 ns/div.

Bottom waveform: Main output (V_{DUT}/10). 10 mV/div, 10 ns/div.

Under these conditions, no forward transient is observed. V_{FM} never exceeds 110% of V_{F}.

Tested using the AVX-TFR-SOT23B test jig and the AVX-FILT-20NS filter.
DUT = Fairchild MMBD4148CC

“1” waveform: MON output (V_in/10, +25V, with ~20 ns rise time). 1 V/div, 10 ns/div.

“2” waveform: Main output (V_{DUT}/10). 50 mV/div, 10 ns/div.

“R1” waveform: Show the main output when the MMBD4148CC is replaced with a 0Ω jumper, to establish the effect of the jig/daughterboard parasitic inductance.

“M” waveform: Shows “2” - “R1” - that is, the DUT waveform with the effect of the parasitic inductance removed. This shows that the narrow spike is the true forward transient, and it is extremely short.

Tested using the AVX-TFR-SOT23B test jig and the AVX-FILT-20NS filter.