

EXECUTIVE SUMMARY

The Keyitec Surge Protective Devices (SPD) were subjected to the 8/20 μ s current waveform as defined in the ANSI/IEEE C62.41-1991. Three units were first subjected to a 6 kV/3 kA (1.2/50 μ s/ 8/20 μ s - combination waveform) pre-strike. Next, the units were subjected to a 200 kA test strike. Lastly, these units received another 6 kV/3 kA post-strike. Following the application of the test surge, the units were examined to determine if they suffered any damage. The surge current and clamping voltage graphs have been recorded. The SPD is considered as compliant if the device exhibits less than 10% deviation from its initial clamping voltage between the pre- and post-strike 6 kV/3 kA combination wave transient (NEMA LS1).

The Keyitec Everprotect 80-120 Surge Suppressor is capable of surviving the ANSI/IEEE C62.41-1991, 200 kA, 8/20 μ s surge based upon pre- and post-test surge performance. Of the three units tested below, the maximum change of peak clamping voltage following the high-current test strike was 1.86 %.

The table below contains the test results obtained at IITRI, R&B Laboratory's Lightning Test Facility. All figures are in Section 4. Further details are found in this report.

Everprotect 80-120 Test Results Summary Table

Serial Number	Injection Mode	Pre-Strike (6kV/3kA)	Test Strike (8/20 μ s)		Post-Strike (6kV/3kA)	Absolute % Deviation in Clamping Voltage (%)	NEMA LS1 1992 Compliance
		Clamping Voltage (V)	Surge Current Level (kA)	Actual (kA)	Clamping Voltage (V)		
B169	L-G	377	200	197.6	384	1.86	Pass
B171	L-G	377	200	196.5	384	1.86	Pass
B184	L-G	372	200	195.3	377	1.34	Pass

Surge current and clamping voltage waveforms are given in Figures 4-9 to 4-17.

IITRI IIT RESEARCH INSTITUTE R&B Laboratory	Report No.	00-0565-5
	Revision	
	Page No.	4 of 29

EXECUTIVE SUMMARY

The Keyitec Surge Protective Devices (SPD) were subjected to the 8/20 μ s current waveform as defined in the ANSI/IEEE C62.41-1991. Three units were first subjected to a 6 kV/3 kA (1.2/50 μ s/ 8/20 μ s - combination waveform) pre-strike. Next, the units were subjected to a 200 kA test strike. Lastly, these units received another 6 kV/3 kA post-strike. Following the application of the test surge, the units were examined to determine if they suffered any damage. The surge current and clamping voltage graphs have been recorded. The SPD is considered as compliant if the device exhibits less than 10% deviation from its initial clamping voltage between the pre- and post-strike 6 kV/3 kA combination wave transient (NEMA LS1).

The Keyitec Everprotect 80-240 Surge Suppressor is capable of surviving the ANSI/IEEE C62.41-1991, 200 kA, 8/20 μ s surge based upon pre- and post-test surge performance. Of the three units tested below, the maximum change of peak clamping voltage following the high-current test strike was 1.04 %.

The table below contains the test results obtained at IITRI, R&B Laboratory's Lightning Test Facility. All figures are in Section 4. Further details are found in this report.

Everprotect 80-240 Test Results Summary Table

Serial Number	Injection Mode	Pre-Strike (6kV/3kA)	Test Strike (8/20 μ s)		Post-Strike (6kV/3kA)	Absolute % Deviation in Clamping Voltage (%)	NEMA LS1 1992 Compliance
		Clamping Voltage (V)	Surge Current Level (kA)	Actual (kA)	Clamping Voltage (V)		
A407	L-G	681	200	198.8	677	0.59	Pass
A408	L-G	670	200	202.3	677	1.04	Pass
A409	L-G	670	200	198.3	677	1.04	Pass

Surge current and clamping voltage waveforms are given in Figures 4-9 to 4-17.

IITRI IIT RESEARCH INSTITUTE R&B Laboratory	Report No.	00-0565-6
	Revision	
	Page No.	4 of 29

EXECUTIVE SUMMARY

The Keyitec Surge Protective Devices (SPD) were subjected to the 8/20 μ s current waveform as defined in the ANSI/IEEE C62.41-1991. Three units were first subjected to a 6 kV/3 kA (1.2/50 μ s/ 8/20 μ s - combination waveform) pre-strike. Next, the units were subjected to a 200 kA test strike. Lastly, these units received another 6 kV/3 kA post-strike. Following the application of the test surge, the units were examined to determine if they suffered any damage. The surge current and clamping voltage graphs have been recorded. The SPD is considered as compliant if the device exhibits less than 10% deviation from its initial clamping voltage between the pre- and post-strike 6 kV/3 kA combination wave transient (NEMA LS1).

The Keyitec Everprotect 80-380 Surge Suppressor is capable of surviving the ANSI/IEEE C62.41-1991, 200 kA, 8/20 μ s surge based upon pre- and post-test surge performance. Of the three units tested below, the maximum change of peak clamping voltage following the high-current test strike was 1.22 %.

The table below contains the test results obtained at IITRI, R&B Laboratory's Lightning Test Facility. All figures are in Section 4. Further details are found in this report.

Everprotect 80-380 Test Results Summary Table

Serial Number	Injection Mode	Pre-Strike (6kV/3kA)	Test Strike (8/20 μ s)		Post-Strike (6kV/3kA)	Absolute % Deviation in Clamping Voltage (%)	NEMA LS1 1992 Compliance
		Clamping Voltage (V)	Surge Current Level (kA)	Actual (kA)	Clamping Voltage (V)		
E0201	L-G	1147	200	196.6	1161	1.22	Pass
E0202	L-G	1158	200	198.8	1170	1.04	Pass
E0205	L-G	1168	200	198.8	1170	0.17	Pass

Surge current and clamping voltage waveforms are given in Figures 4-9 to 4-17.

IITRI IIT RESEARCH INSTITUTE R&B Laboratory	Report No.	00-0565-8
	Revision	
	Page No.	4 of 29

