PRODUCT ADVISORY NOTICE

KEEPING YOU INFORMED OF PRODUCT CHANGES

To: **All Customers, Sales Representatives and Distributors**

Date: **August 3, 2026**

Subject: **Addition of Alternative MOSFET Suppliers for 3KG2, 3JG2, 3D32, 3D50, 3D70, 3D101 and 3D2104 Standard Products**

This Product Advisory Notice is to alert you that Grayhill is adding 3 additional qualified parts for an electronic component (MOSFET) used in our 3KG2, 3JG2, 3D32, 3D50, 3D70, 3D101, and 3D2104 standard products. Our records show that you have purchased at least one of the affected part numbers in the past 5 years. ***Please forward this notification to the appropriate person(s) in your organization.***

Description of Change

Vishay recently informed its customers that MOSFET part number SI7172DP-T1-GE3 will not be available until September 2027. Grayhill validated 3 alternative components that will be used to ensure production once supply of the current Vishay part runs out.

Existing component: Vishay SI7172DP-T1-GE3
Alternative component 1: Infineon BSC500N20NS3GATMA1
Alternative component 2: Infineon BSC320N20NS3GATMA1
Alternative component 3: Toshiba TPH6400ENH,L1Q

This component is used to clamp input voltage to a safe level for downstream electronics. Grayhill performed load dump testing on samples of our standard products to ensure adequate performance is maintained. Please see the attached lab report for details.

Reason for Change

Current part will not be available again until September 2027.

Effective Date

Products shipped from Grayhill on or after August 19, 2026 may include any approved part number. Grayhill has full batch traceability of the part used on all production batches.

Part Numbers Affected

Affected part numbers are listed on pages 2-3.

Action Required

Please contact your Grayhill, Inc. Sales Area Leader for further information.

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Part Numbers Affected

Standard Part Numbers

3D101DEV-200
3D101VT-200
3D101VT-200-E0
3D101VX-200
3D2104DEV-100
3D2104DEV-200
3D2104TK-100
3D2104TK-200
3D2104TK-200-E0
3D2104XK-100
3D2104XK-100-E0
3D2104XK-200
3D32HK-200
3D32HKR-200
3D32HKR-300
3D32XK-200
3D32XKR-200
3D50DEV-100
3D50DEV-100-C
3D50DEV-200
3D50DEV-300
3D50VT-100
3D50VT-100-C
3D50VT-101
3D50VT-200
3D50VT-200-C
3D50VT-300
3D50VT-300-C
3D50VX-100
3D50VX-100-C
3D50VX-200
3D50VX-200-C
3D50VX-300
3D50VX-300-C
3D70DEV-100
3D70DEV-100-C
3D70DEV-200
3D70DEV-200-C
3D70DEV-300
3D70VT-100
3D70VT-100-C
3D70VT-100-C-E0
3D70VT-200
3D70VT-200-C
3D70VT-200-E0
3D70VT-300
3D70VT-300-C
3D70VT-300-E0
3D70VX-100
3D70VX-100-C
3D70VX-100-E0
3D70VX-200
3D70VX-200-C
3DYY32C-335
3D70VX-200-C-E0
3D70VX-200E
3D70VX-200-E0
3D70VX-300
3D70VX-300-C
3D70VX-300-C-E0
3D70VX-300-E0
3D70XT-200-C
3J0005-G2-C3AG
3J0005-G2-C3AW
3J0005-G2-C3GG
3J0005-G2-N3AG
3J0005-G2-N3AW
3J0005-G2-N3GG
3J0015-G2-C3AG
3J0015-G2-C3AW
3J0015-G2-N3AG
3J0015-G2-N3AW
3J0115-G2-C3AG
3J0115-G2-C3AW
3J0115-G2-N3AG
3J0115-G2-N3AW
3J0205-G2-C3AG
3J0205-G2-C3AW
3J0205-G2-N3AG
3J0205-G2-N3AW
3J0215-G2-C3AG
3J0215-G2-C3AW
3J0215-G2-N3AG
3J0215-G2-N3AW
3J0305-G2-C3AG
3J0305-G2-C3AW
3J0305-G2-N3AG
3J0305-G2-N3AW
3J1005-G2-C3AG
3J1005-G2-C3AW
3J1005-G2-N3AG
3J1005-G2-N3AW
3J1015-G2-C3AG
3J1015-G2-C3AW
3J1015-G2-N3AG
3J1015-G2-N3AW
3J1115-G2-C3AG
3J1115-G2-C3AW
3J1115-G2-N3AG
3J1115-G2-N3AW
3J1205-G2-C3AG
3J1205-G2-C3AW
3J1205-G2-N3AG
3J1205-G2-N3AW
3J1215-G2-C3AG
3J1215-G2-C3AW
3J1215-G2-N3AG
3J1215-G2-N3AW
3JYY1115-G2-265-2
3J1305-G2-C3AG
3J1305-G2-C3AW
3J1305-G2-N3AG
3J1305-G2-N3AW
3J2005-G2-C3AG
3J2005-G2-C3AW
3J2005-G2-N3AG
3J2005-G2-N3AW
3J2015-G2-C3AG
3J2015-G2-C3AW
3J2015-G2-N3AG
3J2015-G2-N3AW
3J2115-G2-C3AG
3J2115-G2-C3AW
3J2115-G2-N3AG
3J2115-G2-N3AW
3J2205-G2-C3AG
3J2205-G2-C3AW
3J2205-G2-N3AG
3J2205-G2-N3AW
3J2215-G2-C3AG
3J2215-G2-C3AW
3J2215-G2-N3AG
3J2215-G2-N3AW
3J2305-G2-C3AG
3J2305-G2-C3AW
3J2305-G2-N3AG
3J2305-G2-N3AW
3K006-G2-2RC3AG
3K006-G2-2RC3AW
3K006-G2-2RN3AG
3K006-G2-2RN3AW
3K008-G2-2RC3AG
3K008-G2-2RC3AW
3K008-G2-2RN3AG
3K008-G2-2RN3AW
3K008-G2-4RC3AG
3K008-G2-4RC3AW
3K008-G2-4RN3AG
3K008-G2-4RN3AW
3K012-G2-4RC3AG
3K012-G2-4RC3AW
3K012-G2-4RN3AG
3K012-G2-4RN3AW
3K015-G2-3RC3AG
3K015-G2-3RC3AW
3K015-G2-3RN3AG
3K015-G2-3RN3AW
3K106-G2-2RC3AG
3K106-G2-2RC3AW
3K106-G2-2RN3AG
3K106-G2-2RN3AW
3K108-G2-2RC3AG
3K108-G2-2RC3AW
3K108-G2-2RN3AG
3K108-G2-2RN3AW
3K108-G2-4RC3AG
3K108-G2-4RC3AW
3K108-G2-4RN3AG
3K108-G2-4RN3AW
3K112-2G-4RC3AW
3K112-G2-4RC3AG
3K112-G2-4RC3AW
3K112-G2-4RN3AG
3K112-G2-4RN3AW
3K115-G2-3RC3AG
3K115-G2-3RC3AW
3K115-G2-3RN3AG
3K115-G2-3RN3AW
3K206-G2-2RC3AG
3K206-G2-2RC3AW
3K206-G2-2RN3AG
3K206-G2-2RN3AW
3K208-G2-2RC3AG
3K208-G2-2RC3AW
3K208-G2-2RN3AG
3K208-G2-2RN3AW
3K208-G2-4RC3AG
3K208-G2-4RC3AW
3K208-G2-4RN3AG
3K208-G2-4RN3AW
3K212-G2-4RC3AW
3K212-G2-4RN3AG
3K212-G2-4RN3AW
3K215-G2-3RC3AG
3K215-G2-3RC3AW
3K215-G2-3RN3AG
3K215-G2-3RN3AW
3KYY1008-G2-902N-1
3KYY1106-G2-951-1N

3D Custom Variants

3DYY1018-2
3DYY1028-1
3DYY1028-PI
3DYY2104C-247
3DYY2104C-252
3DYY2104C-254
3DYY2104C-269
3DYY2104C-270
3DYY2104C-287
3DYY32C-186
3DYY32C-198
3DYY32C-209
3DYY32C-213
3DYY32C-217
3DYY32C-220
3DYY32C-221
3DYY32C-232
3DYY32C-293

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3DYY50C-247
3DYY50C-260
3DYY50C-263
3DYY50C-281
3DYY50C-304
3DYY50C-314
3DYY50C-317
3DYY70C-255
3DYY70C-258
3DYY70C-259
3DYY70C-261
3DYY70C-263
3DYY70C-266
3DYY70C-273
3DYY70C-290
3DYY70C-294
3DYY70C-297
3DYY70C-302
3DYY70C-305
3DYY70C-306
3DYY70C-310
3DYY70C-312
3DYY70C-322
3DYY70C-332
3DYY70C-333
3DYY70C-333-A
3DYY70C-339
3DYY70C-340

3J Custom Legends
3JYY1015-G2-200
3JYY1015-G2-205
3JYY1015-G2-210
3JYY1015-G2-211
3JYY1015-G2-212
3JYY1015-G2-215
3JYY1015-G2-217
3JYY1015-G2-219
3JYY1015-G2-220
3JYY1015-G2-222
3JYY1015-G2-231
3JYY1015-G2-245
3JYY1015-G2-246
3JYY1015-G2-252
3JYY1015-G2-252N
3JYY1015-G2-260N
3JYY1115-G2-195
3JYY1115-G2-229
3JYY1115-G2-232
3JYY1115-G2-232-2
3JYY1115-G2-234
3JYY1115-G2-247
3JYY1115-G2-253
3JYY1115-G2-255
3JYY1115-G2-258
3JYY1115-G2-265-1
3JYY1115-G2-268
3JYY1215-G2-206
3JYY1215-G2-208
3JYY1215-G2-209
3JYY1215-G2-218
3JYY1215-G2-221
3JYY1215-G2-221-2
3JYY1215-G2-233
3JYY1215-G2-236
3JYY1215-G2-239
3JYY1215-G2-240
3JYY1215-G2-241-2
3JYY1215-G2-243
3JYY1215-G2-244
3JYY1215-G2-244-B
3JYY1215-G2-248
3JYY1215-G2-263
3JYY1215-G2-266
3JYY1305-G2-248
3JYY1305-G2-264

3K Custom Legends
3KYY1008-G2-238
3KYY1008-G2-584
3KYY1008-G2-613
3KYY1008-G2-614
3KYY1008-G2-615
3KYY1008-G2-616
3KYY1008-G2-617
3KYY1008-G2-618
3KYY1008-G2-619
3KYY1008-G2-620
3KYY1008-G2-655
3KYY1008-G2-672
3KYY1008-G2-697
3KYY1008-G2-698
3KYY1008-G2-699
3KYY1008-G2-707
3KYY1008-G2-708
3KYY1008-G2-709
3KYY1008-G2-749
3KYY1008G2-749N
3KYY1008-G2-783
3KYY1008-G2-785
3KYY1008-G2-794
3KYY1008-G2-798
3KYY1008-G2-821N-1
3KYY1008-G2-821N-2
3KYY1008-G2-824
3KYY1008-G2-840
3KYY1008-G2-841
3KYY1008-G2-850
3KYY1008-G2-868
3KYY1008-G2-872
3KYY1008-G2-881
3KYY1008-G2-902N
3KYY1008-G2-913
3KYY1008-G2-924
3KYY1008-G2-938
3KYY1012-G2-470
3KYY1012-G2-583
3KYY1012-G2-627
3KYY1012-G2-657
3KYY1012-G2-668
3KYY1012-G2-693
3KYY1012-G2-706
3KYY1012-G2-734
3KYY1012-G2-748
3KYY1012G2-748N
3KYY1012-G2-751
3KYY1012-G2-828
3KYY1012-G2-839
3KYY1012-G2-841
3KYY1012-G2-878
3KYY1012-G2-896
3KYY1012-G2-941
3KYY1012-G2-951-3N
3KYY1106-G2-648
3KYY1106G2-648N
3KYY1106-G2-656
3KYY1106-G2-666
3KYY1106-G2-667
3KYY1106-G2-670
3KYY1106-G2-680
3KYY1106-G2-680-2
3KYY1106-G2-681
3KYY1106-G2-681-2
3KYY1106-G2-692
3KYY1106-G2-726
3KYY1106-G2-750
3KYY1106G2-750N
3KYY1106-G2-786
3KYY1106-G2-808-1
3KYY1106-G2-808-2
3KYY1106-G2-811-1
3KYY1106-G2-811-2
3KYY1106-G2-811-3
3KYY1106-G2-811-4
3KYY1106-G2-811-5
3KYY1106-G2-811-6
3KYY1106-G2-811-7
3KYY1106-G2-811-8
3KYY1106-G2-822N
3KYY1106-G2-843-1
3KYY1106-G2-843-2
3KYY1106-G2-877
3KYY1106-G2-900
3KYY1106-G2-903
3KYY1106-G2-916
3KYY1106-G2-923
3KYY1106-G2-948
3KYY1106-G2-949
3KYY1106-G2-951-2N
3KYY1108-G2-654
3KYY1108-G2-658
3KYY1108-G2-723
3KYY1108-G2-724
3KYY1108-G2-727
3KYY1108-G2-768
3KYY1108-G2-769
3KYY1108-G2-777
3KYY1108-G2-780
3KYY1108-G2-808
3KYY1108-G2-827
3KYY1108-G2-839-1
3KYY1108-G2-839-2
3KYY1108-G2-854-1
3KYY1108-G2-854-2
3KYY1108-G2-864-1
3KYY1108-G2-864-2
3KYY1108-G2-869
3KYY1108-G2-907
3KYY1108-G2-929
3KYY1108-G2-931
3KYY1108-G2-956
3KYY1115-G2-628
3KYY1115-G2-629
3KYY1115-G2-631
3KYY1115-G2-659
3KYY1115G2728-1
3KYY1115G2728-2
3KYY1115-G2-766
3KYY1115-G2-767
3KYY1115G2797-1
3KYY1115G2797-2
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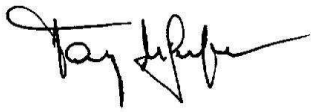
3KYY1115G2797-4
3KYY1115G2797-5
3KYY1115G2797-6
3KYY1115-G2-807
3KYY1115-G2-815
3KYY1115-G2-825
3KYY1115-G2-829
3KYY1115-G2-849
3KYY1115-G2-852
3KYY1115-G2-857
3KYY1115-G2-875
3KYY1115-G2-897
3KYY1115-G2-897-2
3KYY1115-G2-897-3
3KYY1115-G2-904
3KYY1115-G2-904-2
3KYY1115-G2-905
3KYY1115-G2-915
3KYY1115-G2-915-2
3KYY1115-G2-927-1
3KYY1115-G2-927-2
3KYY1115-G2-935

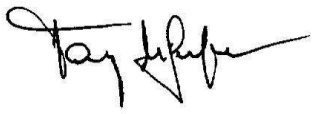
GRAYHILL

LREQ-VU19-1120

3D2104TK-200, 3J0115-G2-C3AG
3JYY1115-G2-195,3KYY1115-G2-659
Test replacements for SEQ3329-0053 (PCN-COMM-296)
Quality Test Report

Revision A
August 03, 2026

Testing Performed By:	Terry Nguyen Quality Engineering Specialist	X 
Testing Start Date	July 30, 2026	
Testing End Date	August 03, 2026	

Report Written By:	Terry Nguyen Quality Engineering Specialist	X 
Report Submitted For Approval	August 03, 2026	

Report Approved By:	Nick Walls Quality Lab Manager	X 
Report Approved On	August 3, 2026	

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1.0 REVISION HISTORY

Revision	Report Writer	Date Written	Report Approver	Date Approved	Description
A	Terry Nguyen	August 03, 2026	Nick Walls	August 3, 2026	Initial Release

2.0 TESTING INFORMATION

2.1. PURPOSE

This document contains the report of all testing completed to validate the alternative FETs to replace Vishay *P/N SI7172DP-T1-GE3*. The alternative FETs (parts) to be tested are Infineon part numbers *BSC500N20NS3GATMA1 & BSC320N20NS3GATMA1,* and Toshiba part numbers *TPH6400ENH,L1Q*. The DUT part numbers being tested are *3D2104TK-200, 3J0115-G2-C3AG, 3JYY1115-G2-195, and 3KYY1115-G2-659.*

2.2. DUT INFORMATION

The devices under test (DUT) are 3D2104TK-200, 3J0115-G2-C3AG, 3JYY1115-G2-195, and 3KYY1115-G2-659.

2.3. ADDITIONAL NOTES

N/A

3.0 REQUIRED TESTING

3.1. LOAD DUMP – TEST A (WITHOUT CENTRALIZED LOAD DUMP SUPPRESSION)

3.1.1. SUMMARY

Table 1 – Load Dump Test Summary

DUT Serial # / Date Code	DUT Part Number	Test Location	Test Dates	Result
8827/2347 10266/2509 9237/2419	3D2104TK-200	EMC Lab	July 30, 2026	Pass
DUT Serial # / Date Code	**DUT Part Number**	**Test Location**	**Test Dates**	**Result**
11/2543	3J0115-G2-C3AG	EMC Lab	July 30, 2026	Pass
DUT Serial # / Date Code	**DUT Part Number**	**Test Location**	**Test Dates**	**Result**
4307/2516 4310/2517	3JYY1115-G2-195	EMC Lab	July 30, 2026	Pass
DUT Serial # / Date Code	**DUT Part Number**	**Test Location**	**Test Dates**	**Result**
131/2522 129/2522 125/2522	3KYY1115-G2-659	EMC Lab	August 03, 2026	Pass

3.1.2. TEST SPECIFICATION

This test is to be run per ISO 16750-2, Section 4.6.4, Test A – Without centralized load dump suppression.

3.1.3. PURPOSE

The DUT shall survive a simulated load dump occurring in the event of a discharged battery being disconnected while the alternator is generating charging current with other loads remaining on the alternator circuit at this moment, with no degradation in performance or visual changes.

3.1.4. TEST CONDITIONS

Table 2 – Load Dump Test Conditions

Quantity	9
Temperature (°C)	Lab Ambient
Humidity (%RH)	Lab Ambient
System Voltage	24V
Alternator Load Dump Suppression	Without Centralized (Test A)
Operational Mode	Powered & Monitored
Functional Status Class	A

Table 3 – Test Parameters (3D2104TK-200)

24V System	
UA (V)	27
US (V)	173
tr (ms)	10
ts (ms)	350
Ri (Ohms)	1
Interval	60
Pulses	10

**Functional Status: Class A

Table 4 – Test Parameters (3J0115-G2-C3AG, 3JYY1115-G2-195, 3KYY1115-G2-659)

24V System	
UA (V)	27
US (V)	173
tr (ms)	10
ts (ms)	350
Ri (Ohms)	8
Interval	60
Pulses	10

**Functional Status: Class A

3.1.5. TEST PROCEDURE

Perform the test per ISO 16750-2, Section 4.6.4, Test A – Without centralized load dump suppression with the following additions/changes.

1. Visual Inspection of the DUT is to be performed before testing.
2. Check functionality of all DUT before testing.
3. Characterize set-up per test conditions.
4. Turn all test equipment and monitoring system ON.
5. Attach Oscilloscope to the test equipment for pulse verification.
6. Attach DUT to the power supply and monitoring system.
7. Enter all parameters in the program to run per specifications as noted in Table 2 (Load Dump test conditions) and Tables 3 & 4 (Test Parameters) for the specific part number.
8. Test DUT for specified duration and pulses as specified.
9. Monitor DUT throughout the test and record the results.
10. Repeat steps 7 – 9 until all DUT have been tested.
11. Perform the Functional Check after Test.

3.1.6. TEST SETUP

Table 5 – Load Dump Equipment List

Equipment ID	Equipment Type	Model Number	Manufacturer	Last Calibrated Date	Calibration Due Date
GT-2101	Micro Transients	MT 5511 / NSG 5500	Teseq	June 26, 2026	June 30, 2028
GT-2102	Load Dump Generator	LD 5550 / NSG 5500	Teseq	June 26, 2026	June 30, 2028
GT-2103	Fast Transient Generator	LD 5550 / NSG 5500	Teseq	June 26, 2026	June 30, 2028
GT-2104	Power Amplifier / Battery Simulator	PA 5840	Teseq	June 26, 2026	June 30, 2028
GT-2110	Digital Phosphor Oscilloscope	DPO2014B	Tektronix	September 29, 2025	September 30, 2026
GT-162	DC Power Supply	E3649A	Agilent	Verify before Use	Verify before Use
GT-236	Digital Multimeter	87V	FLUKE	August 2025	August 31, 2026
VUI-TEST Laptop # 5	Monitoring Laptop Computer	Precision M4300	DELL	Not Required	Not Required
N/A	Monitoring App.	PCAN-View	PCAN	Not Required	Not Required
GT-174	Temp / Hum Meter	FLUKE 971	FLUKE	June 01, 2026	June 30, 2027

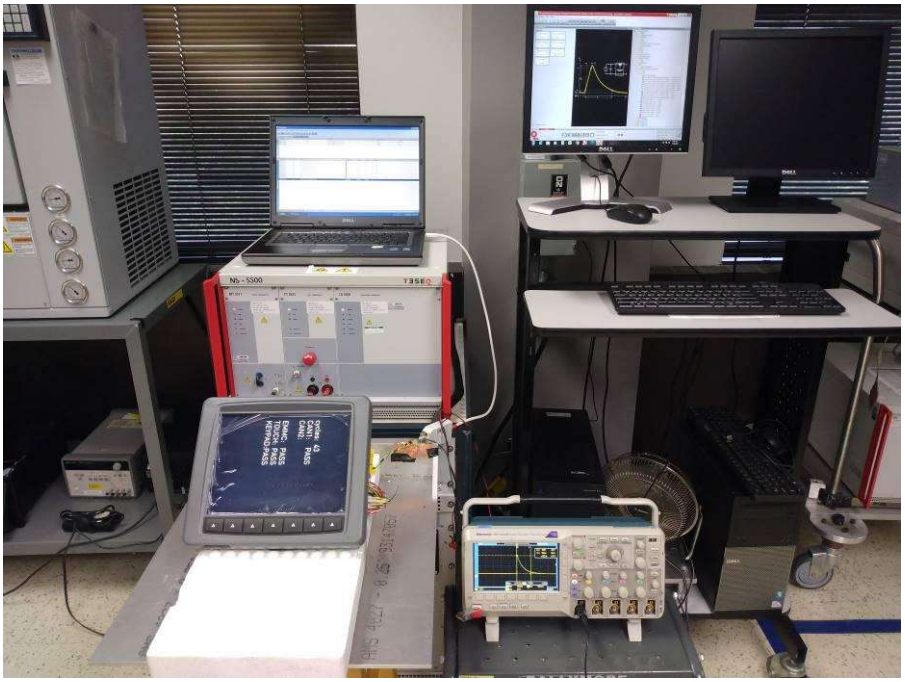

Figure 1 – Load Dump Test Setup (3D2104TK-200)

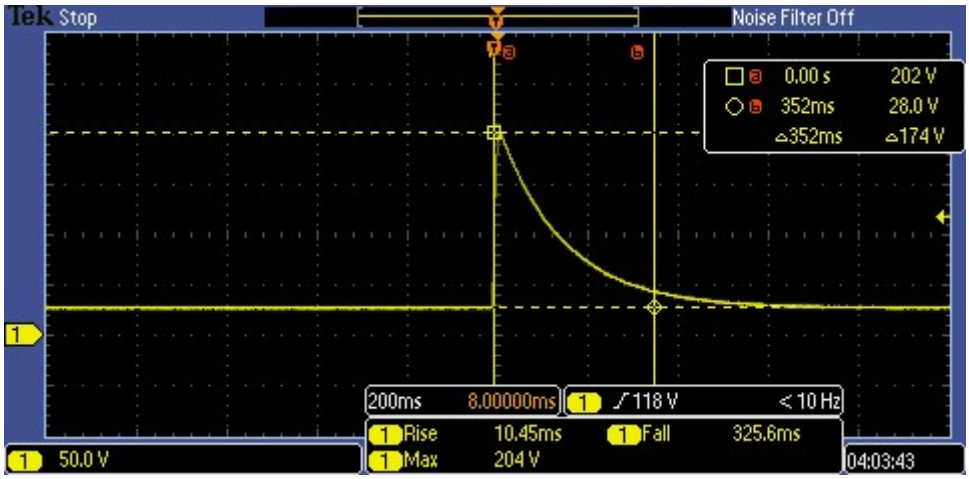

Figure 2 – Load Dump Profile Verification (3D2104TK-200)

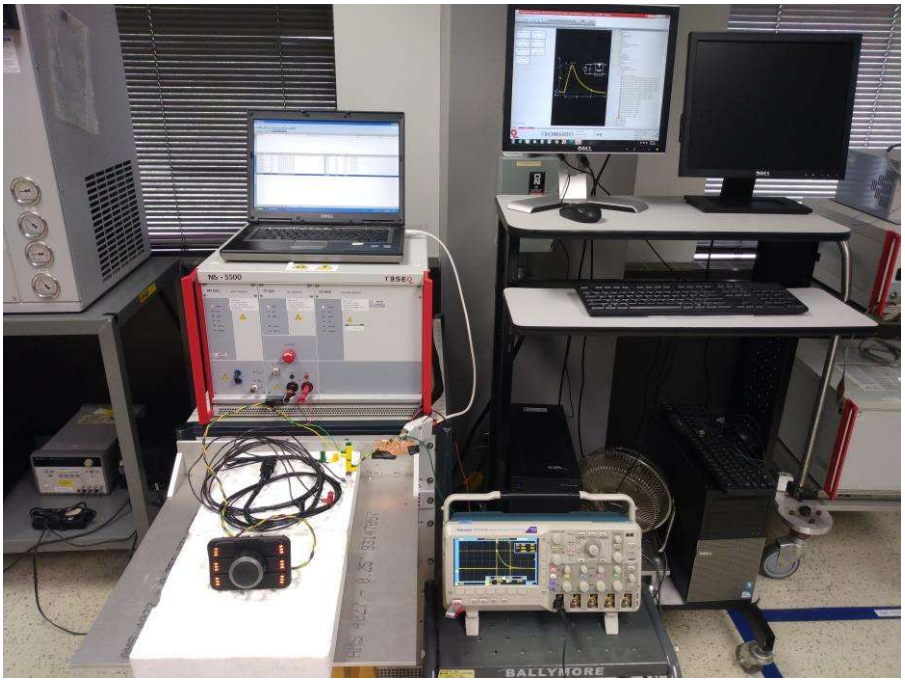

Figure 3 – Load Dump Test Setup (3J0115-G2-C3AG)

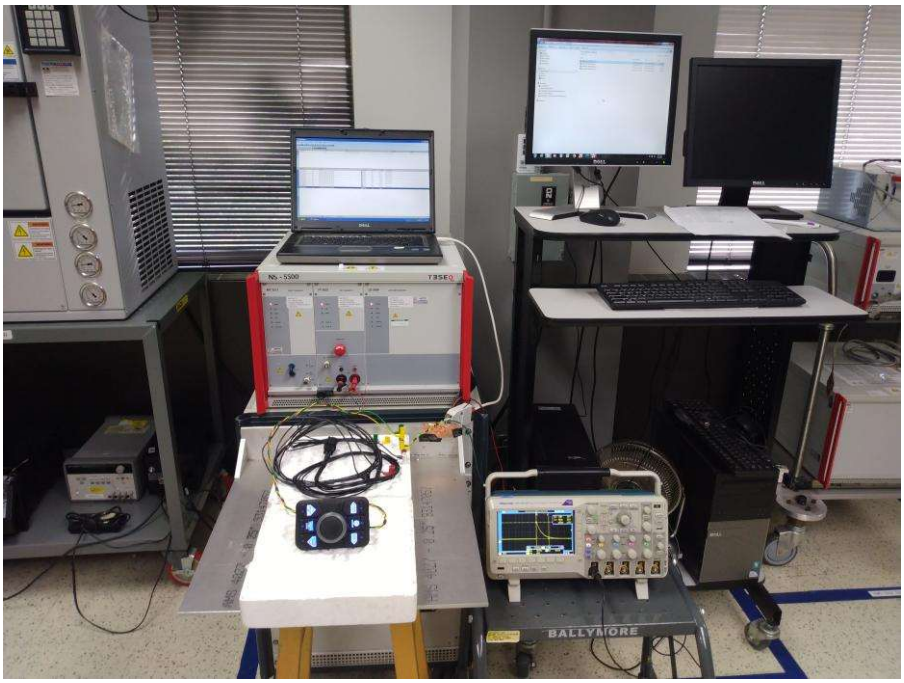

Figure 4 – Load Dump Test Setup (3JYY1115-G2-195)

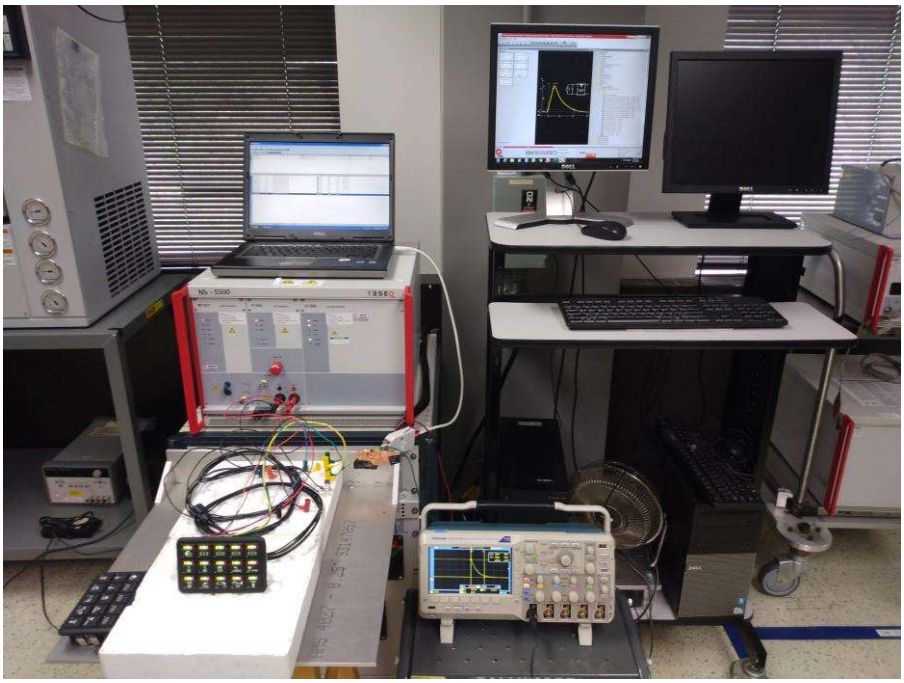

Figure 5 - Load Dump Test Setup (3KYY1115-G2-659)

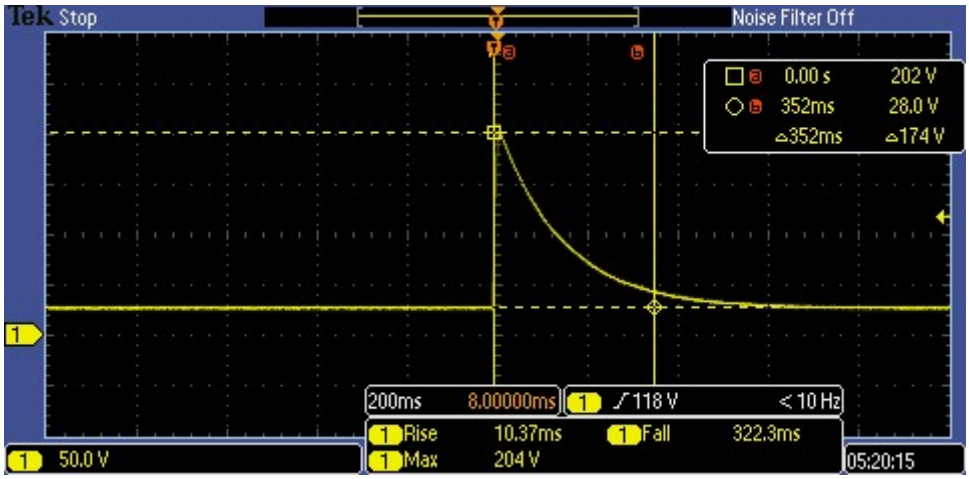

Figure 6 - Load Dump Profile Verification (3J0115-G2-C3AG, 3JYY1115-G2-195, and 3KYY1115-G2-659)

3.1.7. COMPLIANCE CRITERIA

The DUT shall pass the BASIC Functionality checks as noted in the Test Procedure (3.1.5).

The DUT shall meet the Functional Status A.

3.1.8. TEST RESULTS

Table 6 – Load Dump Test Results (Part No. 3D2104TK-200)

DUT Serial Number	DUT Date Code	Alternative FETs	Result (Functional Status)
10266	2509	BSC500N20NS3GATMA1	A - Pass
8827	2347	BSC320N20NS3GATMA1	A - Pass
9237	2416	TPH6400ENH, L1Q	A - Pass

Table 7 – Load Dump Test Results (Part No. 3J0115-G2-C3AG)

DUT Serial Number	DUT Date Code	Alternative FETs	Result (Functional Status)
11	2543	TPH6400ENH, L1Q	A - Pass

Table 8 – Load Dump Test Results (Part No. 3JYY1115-G2-195)

DUT Serial Number	DUT Date Code	Alternative FETs	Result (Functional Status)
4310	2517	BSC500N20NS3GATMA1	A - Pass
4307	2516	BSC320N20NS3GATMA1	A - Pass

Table 9 – Load Dump Test Results (Part No. 3KYY1115-G2-659)

DUT Serial Number	DUT Date Code	Alternative FETs	Result (Functional Status)
129	2522	BSC500N20NS3GATMA1	A - Pass
131	2522	BSC320N20NS3GATMA1	A - Pass
125	2522	TPH6400ENH, L1Q	A - Pass

3.1.9. TEST SUMMARY

Testing was completed per the test specification and test conditions stated. DUT passed the BASIC Functionality Checks after the test and met Functional Status A.