9.1.0 SCOPE

This Printed Circuit card is a HIGH VOLTAGE PULSE AMPLIFIER TRANSFORMER CARD and is identified as:

DS3600HPTF

The HPTG mates by connection to a companion printed circuit card and by connections to the Thyristor Power Conversion Module. This Specification will check the following to insure minimum operation requirements:

Section 9.6.2	High Voltage Attenuator Test
SECTION 9.6.3	Leakage Current Test
Section 9.6.5	Gate Driver Test
Section 9.6.6	Dielectric Test

9.1.1 The HPTF circuitry is analog with a mixture of both high and low voltage designs. With test safety in mind, all test voltage levels will be $\leq$ 50 volts except for dielectric tests.

9.2.0 TEST EQUIPMENT

9.2.1 Standard Equipment Required:

Test equipment shall be provided which meets the requirements and accuracies prescribed in this specification. All test equipment is defined by Quality Control standard _____ except as noted in Section 9.2.2.

9.2.2 Special Equipment Required:

9.2.2.1 Pulse Generator:

Signal level +28V nominal

Current level A maximum peak

Rise and fall time < 0.5μsec

A power transistor or darlington of like characteristics may be interfaced to complete gate driver tests in SECTION 9.6.5.

REV. 1	REV. 4	REV. 7	PRINTED TO DL109 PRI	ENGINEER J.W.H.	GENERAL ELECTRIC DSD SALEM, VA. U.S.A.	Test Specifications HIGH VOLTAGE PULSE AMPLIFIER TRANSFORMER
REV. 2	REV. 5	ISSUED 12/7/79				DS3800HPTF
REV. 3	REV. 6	MADE BY J.Hylton 900928				CONT. ON SH. 9BA SH. NO. 9AA

DSD 0151 (06-76)

9.3.0 POWER SUPPLY REQUIREMENTS AND PIN CONNECTIONS

NOMINAL VOLTAGE[1]	MAXIMUM CURRENT[2]	% REG.	MAXIMUM VOLTAGE[3]	PIN (S)
28V	2A	± 5%	32V	JA1
COM				JA2

Notes:
1. -5% voltage will be used unless otherwise specified in Section 9.6.4.
2. Average current is considerably lower.
3. Voltage above maximum volts may impair associated component performance.

9.4.0 SETUP AND INITIAL LOADING

9.4.1 Connect Pin GND to DCOM.

9.4.2 Connect a 10 Ohm, 2W, CARBON LOAD RESISTOR FROM JB1 TO JB2 and another from JC1 to JC2.

9.5.0 SIGNAL LEVELS

9.5.1 Digital input, Section 9.6.4
"0" Level = .8V
"1" Level = 28 Volt nominal
See Section 9.6.4.3 for pulse duration and pulse rate.

9.6.0 TEST PROCEDURE

9.6.1 The PWB shall be inspected prior to application of power to verify that it has been assembled according to assembly instructions.

REV. 1	REV. 4	REV. 7	PRINTED TO DLI09 PRI	ENGINEER JWH	GENERAL ELECTRIC DSD SALEM, VA. U.S.A.	Test Specifications HIGH VOLTAGE PULSE AMPLIFIER TRANSFORMER
REV. 2	REV. 5	ISSUED 12/7/79				D S 3 8 C O H E T F
REV. 3	REV. 6	MADE BY J.Hylton 790928				CONT. ON SH. 9CA SH. NO. 9BA

DSD 0181 (08-76)

9.6.0 TEST PROCEDURE (Continued)

9.6.2 High Voltage Attenuator Test:

To verify attenuator resistance continuity, perform the following resistance measurement.

From JA8 to JE

VALUE 1.992 MEGΩ ± .1 0/0

9.6.3 Leakage Current Test:

Individually apply +25 through a series 1K resistor between each of the following points and DCOM, and verify that the voltage across the 1K resistor does not exceed 1 MV.

JE4

JB1 JD1

JB2 JA8

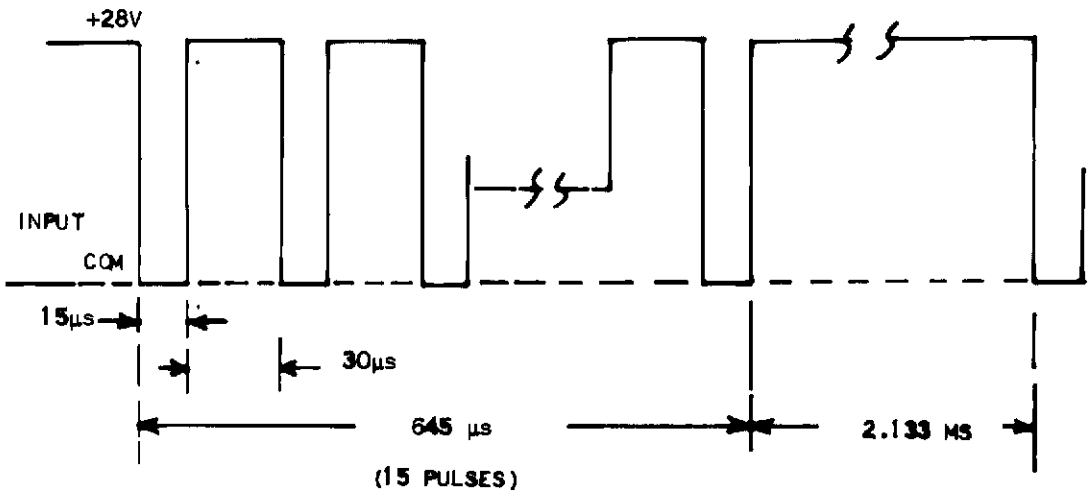
JC1

JC3

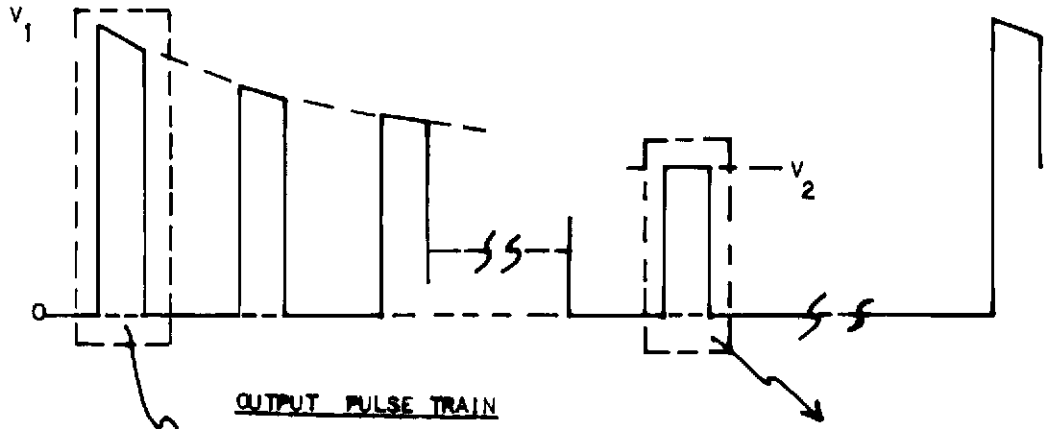
Repeat the above test with -25 volts and again verify that each voltage measurement does not exceed 1 MV.

REV. 1	REV. 4	REV. 7	PRINTS TO DL109 PRI	ENGINEER J.W.H	GENERAL ELECTRIC DSD SALEM, VA. U.S.A.	Test Specifications HIGH VOLTAGE PULSE AMPLIFIER TRANSFORMER
REV. 2	REV. 5	ISSUED 12/7/79				D S 3 8 0 0 H P T F
REV. 3	REV. 6	MADE BY J.Hylton 790928				CONT. ON SH. 9DA SH. NO. 9CA

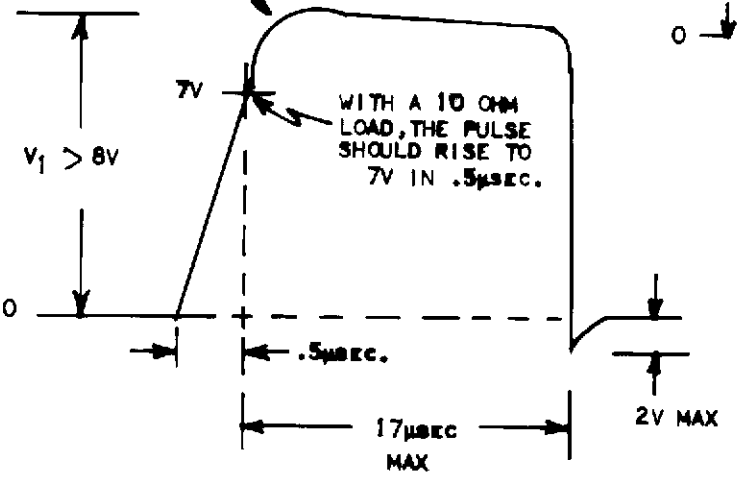
9.6.4 GATE DRIVER INPUT/OUTPUT SPECIFICATION



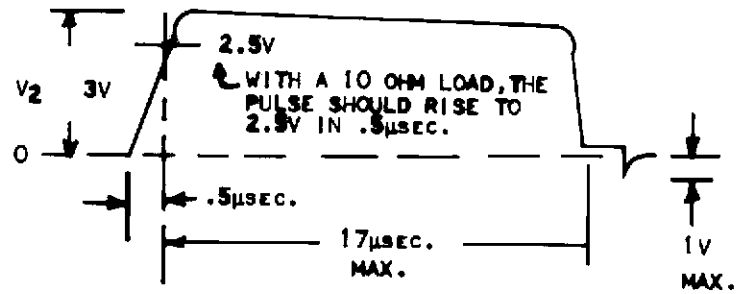
INPUT PULSE TRAIN



OUTPUT PULSE TRAIN



FIRST PULSE



LAST PULSE

REV. 1	REV. 4	REV. 7	PRINTS TO BHLL DL108 PRI	ENGINEER J.WH	GENERAL ELECTRIC DSD SALEM, VA. U.S.A.	TEST SPECIFICATIONS HIGH VOLTAGE PULSE AMPLIFIER TRANSFORMER
REV. 2	REV. 5	ISSUED 12/7/79				DS3800HPTF
REV. 3	REV. 6	MADE BY J.HYLTON 790928				CONT. ON SH. 9EA SH. NO. 9DA

DSD 0151 (09-76)

9.6.5 Gate Driver Test:

9.6.5.1 Apply Bus Power:

+28 VOLTS TO JA1

(COM) TO JA2,JA3,JA5,JA6 AND JA7).

9.6.5.2 Apply input source between SIG1 (JA4) and COM and observe the output from THG1 (JB2)TO THC1 JB1). REFER TO 9.6.4 SPECIFICATION.

VERIFY THAT LED CR15 IS LUMINOUS.

9.6.5.3 REPEAT STEP 9.6.5.2 AND OBSERVE THE OUTPUT FROM THG2 (JC3,4) TO THC2 (JC1,2). REFER TO 9.6.4 SPECIFICATIONS.

REV. 1	REV. 4	REV. 7	PRINTS TO DL109 PRI ANEL	ENGINEER J.W.H	GENERAL ELECTRIC	Test Specifications HIGH VOLTAGE PULSE AMPLIFIER TRANSFORMER
REV. 2	REV. 5	ISSUED 12/7/79			DSD SALEM, VA. U.S.A.	DS3800HPTF
REV. 3	REV. 6	MADE BY J.Hylton 790928				CONT. ON SH. SH. NO. 9EA

DSD 0151 (09-76)

9.6.6. DIELECTRIC TEST (Hipot):

9.6.6.1 APPLY 3800 VRMS TO JB1 AND JC1 SIMULTANEOUSLY WITH JA2 AND GND CONNECTED together and to Hipot common. JB1 AND JC1 MUST WITHSTAND THIS potential for 1 minute without breakdown.

9.6.6.2 APPLY 3800 VRMS TO JA2 AND GND WITH JB1 AND JC1 CONNECTED TOGETHER AND TO HIPOT COMMON. JA2 AND GND MUST WITHSTAND THIS POTENTIAL FOR 1 MINUTE WITHOUT BREAKDOWN.

9.6.7 Repeat Steps 9.6.0 to 9.6.5.