The documentation and process conversion measures necessary to comply with this revision shall be completed by 18 February 2003.

INCH-POUND

MIL-PRF-19500/683
AMENDMENT 2
18 November 2002
SUPERSEDING
AMENDMENT 1
22 February 2002

PERFORMANCE SPECIFICATION

SEMICONDUCTOR DEVICE, TRANSISTOR, FIELD EFFECT, N-CHANNEL,
RADIATION HARDENED (TOTAL DOSE AND SINGLE EVENT EFFECTS)
TYPE 2N7467U2, JANTXVR, F, G, AND H AND JANSR, F, G, AND H

This amendment forms a part of MIL-PRF-19500/683, dated 9 March 2001, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 3

* FIGURE 1, dimensions table, delete and substitute:

"

LTR	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BL	.685	.695	17.40	17.65
BW	.520	.530	13.21	13.46
CH		.142		3.60
LL1	.470	.480	11.94	12.19
LL2	.152	.162	3.86	4.11
LH	.010	.020	.254	.508
LS1	.240 BSC		6.10 BSC	
LS2	.120 BSC		3.05 BSC	
LW1	.435	.445	11.05	11.30
LW2	.135	.145	3.43	3.68
Q1	.035		.89	
Q2	.050		1.27	

"

* FIGURE 1, note 3, delete and substitute "3. Dimensions and tolerancing shall be in accordance with ASME Y14.5M-1982."

PAGE 8

4.5.2.b, delete "20 A" and substitute "16.67 A ".

4.5.2.d, delete "20 V" and substitute "10 V ".

PAGE 9

4.5.3.b, delete "20 A " and substitute "16.67 A ".

4.5.3.d, delete "20 V " and substitute "10 V ".

PAGE 10

TABLE I, subgroup 2, thermal impedance, maximum limits column, delete "0.37" and substitute "0.38".

TABLE I, subgroup 2, forward voltage, conditions column, delete "$I_D = I_{D2}$", and substitute "$I_D = I_{D1}$".

PAGE 15

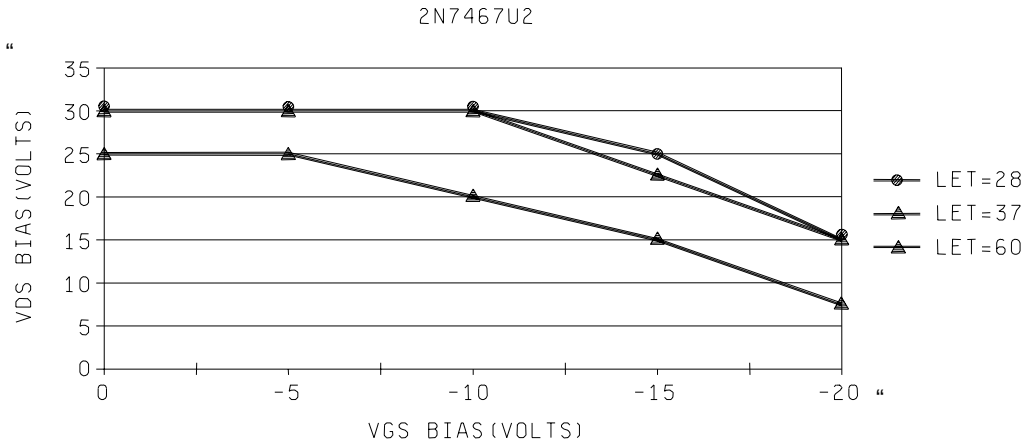
TABLE III, subgroup 7, delete and substitute:

"

Subgroup 7			3 devices
SEE 2/ 3/ 4/	1080	See figure 4.	
Electrical measurements 5/		I_{GSS1} and I_{DSS1} in accordance with table I, group A, subgroup 2	
SEE irradiation		Fluence = 3E5 ± 20 percent ions/cm^2 Flux = 2E3 to 2E4 ions/cm^2/sec Temperature = 25 ± 5 °C (ION – COPPER) LET = 28 MeV-cm^2/mg Range = 40 microns Energy = 261 MeV Insitu bias conditions: V_{DS} = 30V & V_{GS} = -10V V_{DS} = 25V & V_{GS} = -15V V_{DS} = 15V & V_{GS} = -20V (ION – BROMINE) LET = 37 MeV-cm^2/mg Range = 37 microns Energy = 285 MeV Insitu bias conditions: V_{DS} = 30V & V_{GS} = -10V V_{DS} = 22.5V & V_{GS} = -15V V_{DS} = 15V & V_{GS} = -20V (ION – IODINE) LET = 60 MeV-cm^2/mg Range = 33 microns Energy = 344 MeV Insitu bias conditions: V_{DS} = 25V & V_{GS} = -5V V_{DS} = 20V & V_{GS} = -10V V_{DS} = 15V & V_{GS} = -15V V_{DS} = 7.5V & V_{GS} = -20V	
Electrical measurements 5/		I_{GSS1} and I_{DSS1} in accordance with table I, group A, subgroup 2	

1/ A separate sample for each test shall be pulled.
2/ Group E qualification of SEE testing may be performed prior to lot formation. Qualification may be extended to other performance specifications utilizing the same structurally identical die design.
3/ Device qualification to a higher level LET is sufficient to qualify all lower level LET's.
4/ The sampling plan applies to each bias condition.
5/ Examine I_{GSS1} and I_{DSS1} before and following SEE irradiation to determine acceptability for each bias condition. Other test conditions in accordance with table I, group A, subgroup 2 herein, may be performed at the manufacturer's option."

FIGURE 4, delete and substitute:



The margins of this amendment are marked with asterisks to indicate where changes from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this amendment based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

Custodians:
Army - CR
Navy - EC
Air Force - 11
NASA - NA
DLA - CC

Preparing activity:
DLA - CC

(Project 5961-2663-02)