TABLE 1 - Failure (or Pass/Fail) N-Channel Device Vds Voltages for the Indicated Ion Beams																
BVds	**Mfr.**	**Mfr. No.**	**Gen. No.**	**Chan. Type**	**Samp.**	**Vgs (off) [-V]**	**Low Z Ions**	**Cu = 16: Fe, Ni, Co LET = 27:**	**Br, Kr LET = 38**	**Hi Z Ions**	**Hi-Energy Beams***	**Fail mode**	**Test Org.**	**Date**	**Test Fac.**	**Remarks**
	Rated Vds = 200 V															
200	**APT**	**20M45BNFR**		**n**	**5**	**0**		**115/120(Co)**				**SEB**	**BREL**	**3/97**	**UCB**	
200	GEC	IRF250	2N6766	n	1	10	180(N) 170(Ne) <80(Ar)					SEB	Rock/ Aero	1990	UCB	
200	**HAR**	**FRK250**		**n**	**3**	**0**			**80/100(Br)**			**SEGR**	**Rock**	**9/92**	**BNL**	**WP-04. T = 90° C**
200	**HAR**	**FRK250**		**n**	**2**	**0**		**140160(Ni)**				**SEGR**	**Rock**	**12/92**	**BNL**	**WP-04. T = 90° C**
200	**HAR**	**FRK250**		**n**	**2**	**0**		**160/180(Ni)**				**SEGR**	**Rock**	**12/92**	**BNL**	**WP-04. T = 90° C**
200	**HAR**	**FRL230D1**		**n**	**1**	**0**				**60/62.5(I)**		**SEGR**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	**HAR**	**FRL230D1**		**n**	**1**	**0**			**90/95(Br)**			SEGR	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	**HAR**	**FRM230**		**n**	**1**	**0**		**180/200(Ni)**				**SEGR**	**Rock**	**12/92**	**BNL**	**T = 90° C**
200	**HAR**	**FRM230R**		**n**	**1**	**0**		**150/170(Ni)**				**SEGR**	**Rock**	**12/92**	**BNL**	**T = 90° C**
200	**HAR**	**FRM240**		**n**	**2**	**0**		**60/100(Fe)**				**SEGR**	**JPL**	**12/91**	**BNL**	**T = 25° C**
200	**HAR**	**FRM240**		**n**	**2**	**0**			**80/100(Br)**			**SEGR**	**JPL**	**12/91**	**BNL**	**T = 25° C**
200	**HAR**	**FRM240**		**n**	**1**	**0**			**60/80(Br)**			**SEGR**	**JPL**	**6/92**	**BNL**	**T = 25° C**
200	HAR	FRM240D1	2N7285	n	2 & 2	0		60/100(Fe)	80/100(Br)			SEGR	JPL	91/92	BNL	T = 100° C data has Vds(th) = 60/80 with Br.
200	HAR	230 family	2N6758	n		5		64					HAR	1993	BNL?	SSF Table
200	HAR	230 family	2N6758	n		5		70					HAR	1993	BNL?	SSF Table
200	HAR	230 family	2N6758	n		5		70				SEB SEGR	BREL	3/93	UCB	WP-01. D/C M9226. T = 45° C.
200	HAR	230 family	2N6758	n		5		80				SEB SEGR	BREL	3/93	UCB	WP-01. D/C M9226. T = 100° C.
200	**HAR**	**FRK250**		**n**	**1**	**5**			**80/100(Br)**			**SEGR**	**Rock**	**9/92**	**BNL**	**WP-04. T = 90° C**
200	**HAR**	**FRK250**		**n**	**3**	**5**		**140160(Ni)**				**SEGR**	**Rock**	**12/92**	**BNL**	**WP-04. T = 90° C**
200	**HAR**	**FRK250**		**n**	**1**	**5**		**120/140(Ni)**				**SEGR**	**Rock**	**12/92**	**BNL**	**WP-04. T = 90° C**
200	HAR	FRK250R	2N7293	n	2	5			90(Kr)			SEGR	NASDA	2&3/95	JAERI?	D/C 9249. T = 80° C. Shinosaki.
200	**HAR**	**FRL230D1**		**n**	**1**	**5**				**47.5/50(I)**		**SEGR**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	**HAR**	**FRL230D1**		**n**	**1**	**5**			**90/95(Br)**			SEGR	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	HAR	FRL230R		n		5			100(Kr)			SEGR	NASDA	2&3/95	JAERI?	D/C 9327. T = 25 & 80° C. Shinosaki
200	**HAR**	**FRM230**		**n**	**1**	**5**		**180/200(Ni)**				**SEGR**	**Rock**	**12/92**	**BNL**	**T = 90° C**
200	HAR	FRM230	2N7274	n		5		166(Ni?)					HAR	1993	BNL?	SSF Table
200	**HAR**	**FRM230R**		**n**	**1**	**5**		**160/180(Ni)**				**SEGR**	**Rock**	**12/92**	**BNL**	**T = 90° C**
200	**HAR**	**FRL230D1**		**n**	**1**	**10**				**30/32.5(I)**		**SEGR**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	**HAR**	**FRL230D1**		**n**	**1**	**10**			**90/95(Br)**			**SEGR/ SEB**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	**HAR**	**FRL230D1**		**n**	**1**	**10**			**70(Br)**			**SEGR**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	**HAR**	**FRL230D1**		**n**	**1**	**15**				**22.5/25(I)**		**SEGR**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	HAR	FRM240D1	2N7285	n	1*	15	180/200(Ar)					SEB	JPL	91/92	UCB	*Not latest technology. T = 100° C data has no SEB.
200	**HAR**	**FRL230D1**		**n**	**1**	**20**				**17.5/20(I)**		**SEGR**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	**HAR**	**FRL230D1**		**n**	**1**	**20**			**30/32.5(Br)**			SEGR	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	**HAR**	**FSL230**		**n**	**3**	**22**		**200(Ni)**				**none**	**NSWC**	**7/93**	**BNL**	**T = 25°C**

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BVds	**Mfr.**	**Mfr. No.**	**Gen. No.**	**Chan. Type**	**Samp.**	**Vgs (off) [-V]**	**Low Z Ions**	**Cu = 16: Fe, Ni, Co LET = 27:**	**Br, Kr LET = 38**	**Hi Z Ions**	**Hi-Energy Beams***	**Fail mode**	**Test Org.**	**Date**	**Test Fac.**	**Remarks**
200	**INR**	**2N6798**		**n**	**3**	**0**					**170-p**	**SEB**	**BREL**	**1995**	**HCL**	**148 MeV protons**
200	**INR**	**2N7262SG**	**230**	**n**	**10**	**0**		**136**	**155**			**SEGR**	**BREL**	**7/97**	**88"**	
200	**INR**	**2N7269SG**	**250**	**n**	**10**	**0**		**145**	**150**			**SEGR**	**BREL**	**9/97**	**88"**	
200	**INR**	**2N7269SG**	**250**	**n**	**10**	**0**		**157**	**180**			**SEGR**	**BREL**	**9/97**	**88"**	
200	INR	IRF210	2N6784	n		0		140/150(Ni)	100/120(Br)			SEB	ESA	1/94	BNL	D/C 9228G. Harwell Rept. AEA-RS-1348
200	INR	IRF230	2N6798	n		0		160/170(Ni)	<140(Br)			SEB	ESA	1/94	BNL	D/C 9228G. Harwell Rept. AEA-RS-1348
200	INR	IRF240		n		0		140/150(Ni)	120/130(Br)			SEB	ESA	1/94	BNL	D/C 9228G. Harwell Rept. AEA-RS-1348
200	INR	IRF250	2N6766	n		0		120/140(Ni)	<120(Br)			SEB	ESA	1/94	BNL	D/C 9228G. Harwell Rept. AEA-RS-1348
200	**INR**	**IRF250**		**n**	**6**	**0**					**200-n**	**SEB**	**BREL**	**1995**	**WNR**	**Cosmic ray neutrons**
200	INR	IRFF230	2N6798	n		0		135(Ni)				SEB	Rock	7/93	BNL	D/C 9146. R. Ferdon
200	INR	IRFF230	2N6798	n		0		140				SEB	BREL	10/93	UW	D/C 9217. T = 22° C. WP-01. Oberg.
200	INR	IRH7230		n	5	0		200(Ni)				none	Rock	12/92	BNL	D/C 9042. T = 90°C.
200	INR	IRH7250		n	4	0			200(Br)			none	JPL	91/92	BNL	
200	INR	IRH7250		n		0		180(Ni)				SEGR	Rock	8/93	BNL	D/C A9316. WP-04. R. Ferdon.
200	INR	IRHM8250		n	4	0		140				SEGR	BREL	1/93	UW	WP-01. T = 100° C. Oberg
200	**INR**		**2N6790**	**n**	**1**	**0**				**105/110(I)**		**SEGR**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	INR	IR7250		n	18	2			125(Br)	50(Au)		SEGR	NWSC	8/95	BNL	Titus
200	INR	IRHF7230	2N7262	n		2		200(Ni)	160(Br)			SEGR	Rock	7/92	BNL	IR7xxx = Rad tolerant. T = 90° C.
200	INR	IRF220		n		5		145(Co)				SEB	BREL	6/93	UCB	D/C 9218G. T = 45° C. WP-01. W.Will.
200	INR	IRF220		n		5		150(Co)				SEB	BREL	6/93	UCB	T =100° C. WP-01. W. Will
200	INR	IRF250	2N7225	n		5		150(Co?)				SEB	BREL	11/93	UCB	WP-01. T = 25° C.
200	INR	IRF250	2N7225	n		5		160(Co?)				SEB	BREL	11/93	UCB	WP-01. T = 100° C.
200	INR	IRFF220	2N6790	n		5		145(Ni)				SEB	Rock	7/93	BNL	D/C 9040. WP-04. R. Ferdon
200	INR	IRFF230	2N6798	n		5		135(Ni)				SEB	Rock	7/93	BNL	D/C 9146. R. Ferdon
200	INR	IRFF230	2N6798	n		5		120				SEB SEGR	BREL	10/93	UW	T = 80° C. WP-01. Oberg.
200	INR	IRFF230	2N6798	n	2	5			120(Kr)			SEB	NASDA	3/95	JAERI?	D/C 9313. T = 25 & 80° C. Shinosaki.
200	INR	IRFM250	2N7225	n	2	5			130(Kr)			SEB	NASDA	3/95	JAERI?	D/C 9120. T = 80° C. Shinosaki. Need RT data>
200	INR	IRH7230		n	5	5		200(Ni)				none	Rock	12/92	BNL	D/C 9042. T = 90°C.
200	INR	IRH7250		n		5		120?(Ni)				SEGR	Rock	8/93	BNL	D/C A9316. WP-04. R. Ferdon.
200	INR	IRHM7250	2N7269	n		5		200				none	BREL	1/94	UCB	WP-01. T = 100° C. Oberg
200	INR	IRHM8250		n		5		110				SEGR	BREL	1/93	UW	WP-01. T = 100° C. Oberg
200	**INR**		**2N6790**	**n**	**1**	**5**				**90/95(I)**		**SEGR**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	INR	IRF250	2N6766	n	2	10	190(N) 200(Ne) 120(Ar)	100(Ni) 90(Cu)	85(Br)			SEB	Rock/ Aero	90/92	UCB BNL	Waskiewicz
200	**INR**		**2N6790**	**n**	**1**	**10**				**65(I)**		**SEGR**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	**INR**		**2N6790**	**n**	**2**	**10**				**70/75(I)**		**SEGR**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	INR	IRHM7250	2N7269	n		12		170				SEGR	BREL	1/94	UCB	WP-01. T = 100° C. Oberg
200	INR	IR7250		n		15			75(Br)	25(Au)		SEGR	NWSC	8/95	BNL	Titus
200	INR	IRH7250		n	3,2,4	15	180/200(Ar)	160/200(Fe)	120/140(Br)			SEGR	JPL	91/92	BNL	Data @ T = 100° C exists for Vgs = 15 V only.
200	INR	IRHF7230	2N7262	n	5	15		*200(Ni)	90(Br)			SEGR	Rock	7/92	BNL	*1 OF 5 Failed @ 200 V with Ni.

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BVds	**Mfr.**	**Mfr. No.**	**Gen. No.**	**Chan. Type**	**Samp.**	**Vgs (off) [-V]**	**Low Z Ions**	**Cu = 16: Fe, Ni, Co LET = 27:**	**Br, Kr LET = 38**	**Hi Z Ions**	**Hi-Energy Beams***	**Fail mode**	**Test Org.**	**Date**	**Test Fac.**	**Remarks**
200	INR	IRH7250		n	2	20			80(Br)			SEGR	JPL	91/92	BNL	
200	**INR**		**2N6790**	**n**	**3**	**20**				**35/37.5(I)**		**SEGR**	**JPL**	**6/97**	**BNL**	**Selva/Swift**
200	INR	IRF210	2N6784	n				<130(Cu)				SEB	Rock	1990	UCB	
200	**IXY**	**IXFH50N20**		**n**	**5**	**0**		**50**	**55**			**SEB**	**BREL**	**3/97**	**88"**	
200	RCA	25N20		n	1	10	200(N) 200(Ne) 180(Ar)	<70(Cu)				SEB	Rock/ Aero	1990	UCB	
200	RCA	IRF250	2N6766	n	1	10	180(N) 120(Ar)	80(Cu)				SEB	Rock/ Aero	1990	UCB	
200	RCA	IRF230	2N6758	n		2?		<100(Cu)				SEB	Rock	1990	UCB	
200	RCA	IRFF230	2N6798	n		2?		<90(Cu)				SEB	Rock	1990	UCB	
200	**SIL**	**2N6790**	**220**	**n**	**5**	**0**		**80**	**90**			**SEB**	**BREL**	**7/97**	**88"**	
200	SIL	9230 family	2N6851	n		5		200(Co)				none	BREL	7/95	UCB	Oberg. T ~100°C. (looking for SEGR)
200	SIL	IRF250	2N6766	n	2	10	160(N) 60(Ar)					SEB	Rock/ Aero	1990	UCB	
200	SIL	IRFF230	2N6798	n		12		180				SEGR	BREL	10/93	UW	Oberg. T = 100°C. Worst case for SEGR. SSF WP-01