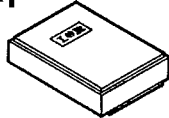


Government/ Space Products

International
IR Rectifier

Radiation Hard HEXFETs

N-Channel

Part Number	V _{DS} Drain Source Voltage (Volts)	R _{DS(on)} On-State Resistance (Ohms)	I _D Continuous Drain Current 25°C Case (Amps)	I _{DM} Pulse Drain Current (Amps)	P _D Max Power Dissipation (Watts)	Case Outline Number (2)	Notes	Case Style
IRHN7150	100	0.065	25	100	75	H21		SMD-1 
IRHN8150	100	0.065	25	100				
IRHN7250	200	0.11	18.5	80				
IRHN8250	200	0.11	18.5	80				
IRHN7450	500	0.45	8	50				
IRHN8450	500	0.45	8	50				
IRHE7110	100	0.6	6	20	20	H22		LCC 
IRHE8110	100	0.6	6	20				
IRHE7130	100	0.18	8	25				
IRHE8130	100	0.18	8	25				
IRHG7110	100	0.80	0.95	4	1.4	H15		MO-036AC 
	-100	1.40	-0.75	-3				
IRHG8110	100	0.80	0.95	4				
	-100	1.40	-0.75	-3				
IRHF7130	100	0.20	8	32	25	H13		TO-205AF TO-39 
IRHF8130	100	0.20	8	32				
IRHF7230	200	0.44	5	20				
IRHF8230	200	0.44	5	20				
IRHM7150	100	0.065	25	100	150	H19	(1)	TO-254AA 
IRHM8150	100	0.065	25	100				
IRHM7250	200	0.10	25	100				
IRHM8250	200	0.10	25	100				
IRHM7450	500	0.45	11.5	40				
IRHM8450	500	0.45	11.5	40				
IRH7150	100	0.055	30	150	150	H18		TO-204AA/AE TO-3 
IRH8150	100	0.055	30	150				
IRH7250	200	0.10	27	110				
IRH8250	200	0.10	27	110				
IRH7450	500	0.44	11.5	40		H17		
IRH8450	500	0.44	11.5	40				

- DEMONSTRATES EXCELLENT THRESHOLD VOLTAGE STABILITY AND BREAKDOWN VOLTAGE STABILITY AT TOTAL RADIATION DOSES AS HIGH AS 1 MEGARAD.
- CAPABLE OF SURVIVING TRANSIENT IONIZATION PULSES AS HIGH AS 1×10^{12} RADS (SI)/SEC
- PASSES SINGLE EVENT UPSET TEST

Electrical Probe Specifications for N-Channel Rad Hard Power MOSFET Die

Hex Size	Part Number	V _{DS} (V)	R _{DS(on)} (Ohm)	Recommended Bond Wire Size Source (in/mm) Gate (in/mm)		Closest Part Number	Figure Number (3)
1	IRHC7110	100	0.60	0.008/0.20	0.005/0.13	IRHE7110	D45
3	IRHC7130	100	0.16	0.008/0.20	0.005/0.13	IRH7130	D46
3	IRHC7230	200	0.44	0.008/0.20	0.005/0.13	IRH7230	D46
5	IRHC7150	100	0.055	0.020/0.51	0.005/0.13	IRH7150	D47
	IRHC7230	200	0.10	0.020/0.51	0.005/0.13	IRH7250	D47
	IRHC7450	500	0.44	0.012/0.31	0.005/0.13	IRH7450	D48

(1) PACKAGES CONTAINING BERYLLIA SHALL NOT BE GROUND, SANDBLASTED, MACHINED, OR OTHER OPERATIONS PERFORMED ON THEM WHICH WILL PRODUCE BERYLLIA OR BERYLLIUM DUST. FURTHERMORE, BERYLLIUM OXIDE PACKAGES SHALL NOT BE PLACED IN ACIDS THAT WILL PRODUCE FUMES CONTAINING BERYLLIUM.

(2) FOR CASE OUTLINE DRAWING SEE PAGE 136.

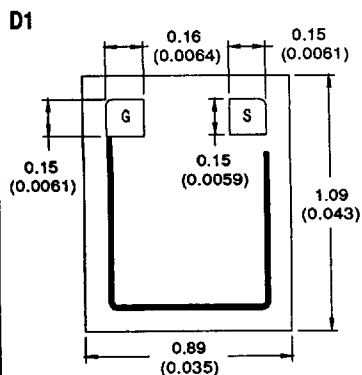
(3) FOR DIE OUTLINE DRAWING SEE PAGE 164.

HEXFET Die Outlines

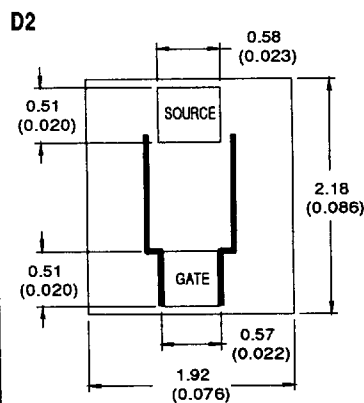
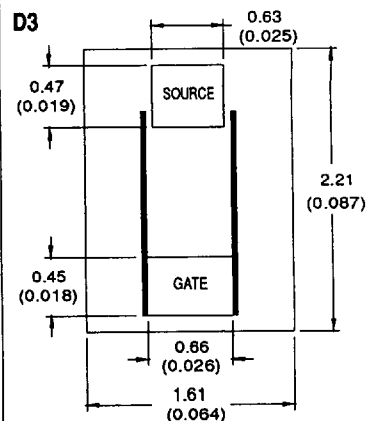
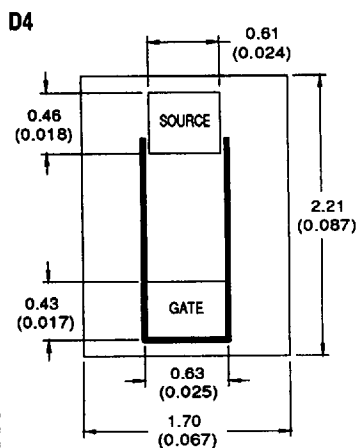
Appendix F

INTERNATIONAL RECTIFIER

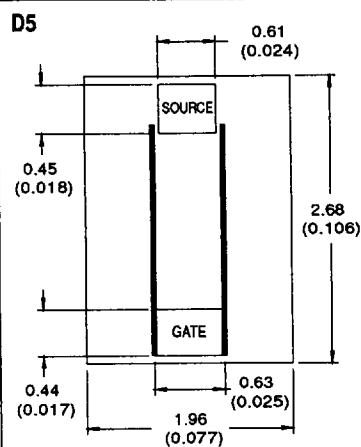
APPENDICES



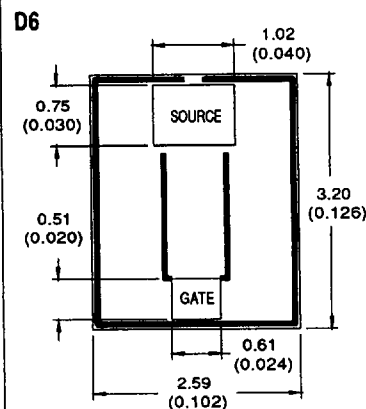
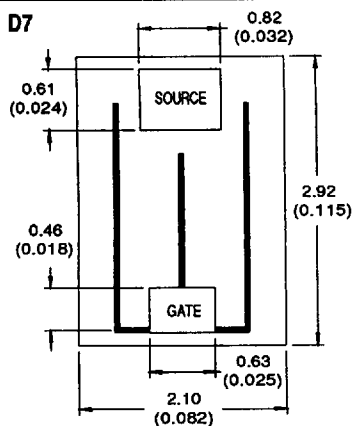
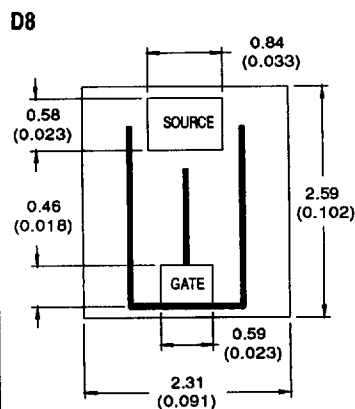
HEX-Z: 100V, N-CHANNEL


HEX-1: 60V, N-CHANNEL
LOGIC LEVEL: HEX-1: 60V, N-CHANNEL

HEX-1: 100V, N-CHANNEL
LOGIC LEVEL: HEX-1: 100V, N-CHANNEL


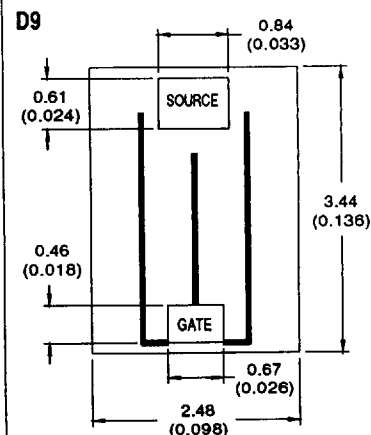
HEX-1: 200V & 250V, N-CHANNEL



HEX-1: 400V, N-CHANNEL


HEX-2: 60V, N-CHANNEL
LOGIC LEVEL: HEX-2: 60V, N-CHANNEL

HEX-2: 100V, N-CHANNEL
LOGIC LEVEL HEX-2: 100V, N-CHANNEL


HEX-2: 200V & 250V, N-CHANNEL



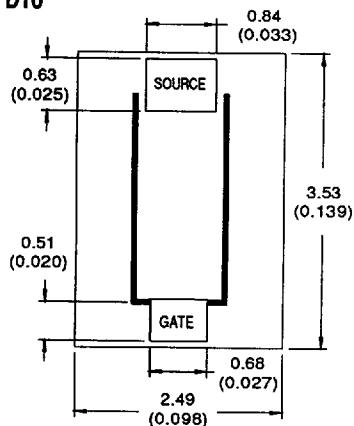
HEX-2: 400V & 500V N-CHANNEL

Appendix F

4855452 0016046 505 INR

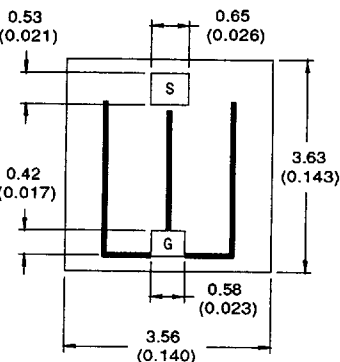
HEXFET Die Outlines

D10



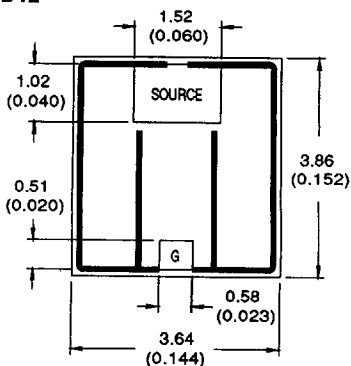
HEX-2 600V, N-CHANNEL

D11



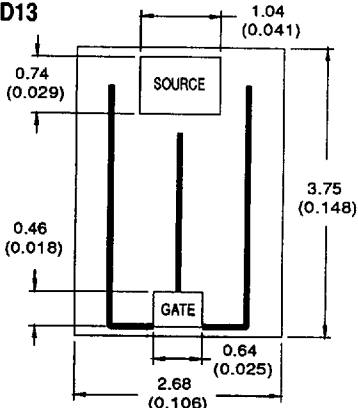
HEX-2: 800V, 900V & 1000V, N-CHANNEL

D12



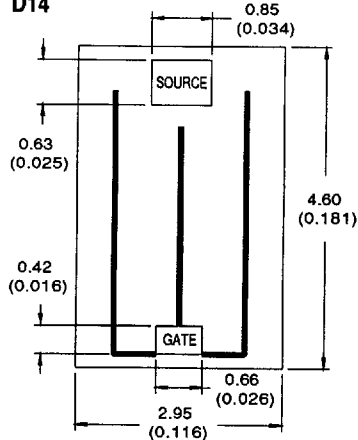
HEX-3: 60V, N-CHANNEL
LOGIC LEVEL: HEX-3: 60V, N-CHANNEL

D13



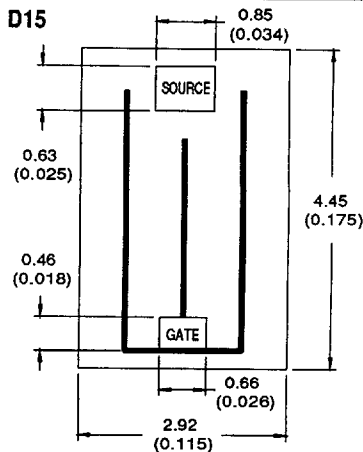
HEX-3: 100V, N-CHANNEL
LOGIC LEVEL: HEX-3: 100V, N-CHANNEL

D14



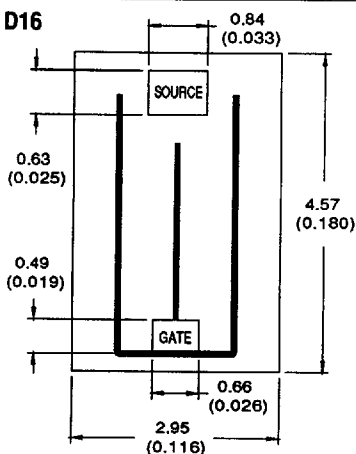
HEX-3: 200V & 250V, N-CHANNEL

D15



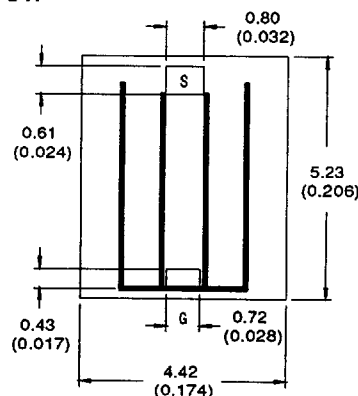
HEX-3: 400V & 500V, N-CHANNEL

D16



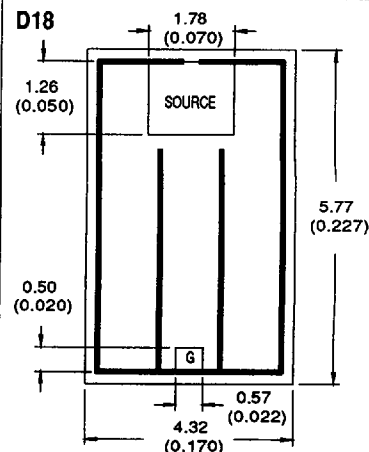
HEX-3: 600V, N-CHANNEL

D17



HEX-3: 800V, 900V & 1000V, N-CHANNEL

D18



LOGIC LEVEL: HEX-4: 60V, N-CHANNEL

HEXFET Die Outlines

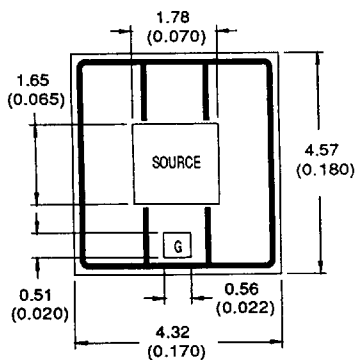
Appendix F

b5E D

INTERNATIONAL RECTIFIER

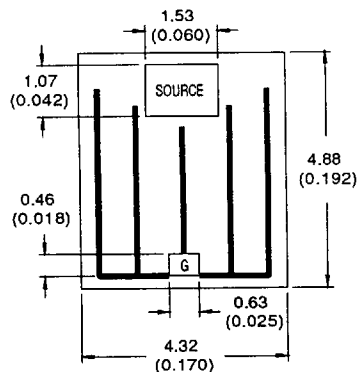
APPENDICES

D19



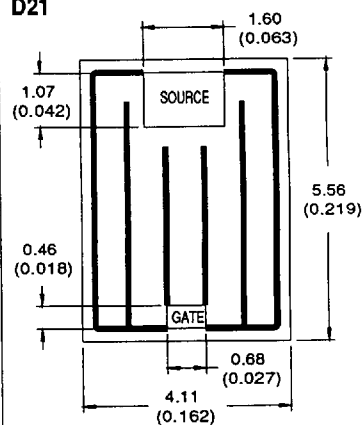
HEX-4: 50V & 60V, N-CHANNEL

D20



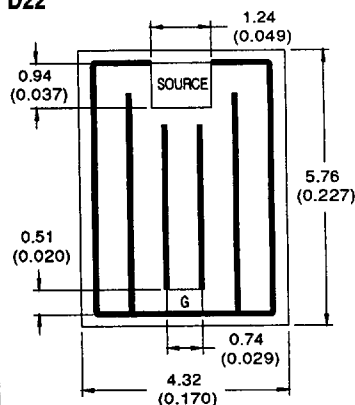
HEX-4: 100V, N-CHANNEL
LOGIC LEVEL: HEX-4: 100V, N-CHANNEL

D21



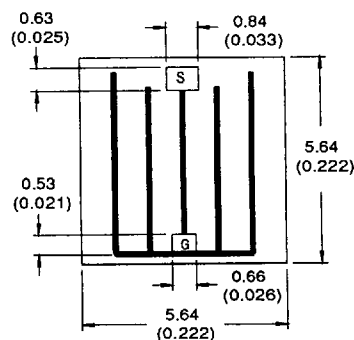
HEX-4: 200V & 250V, N-CHANNEL

D22



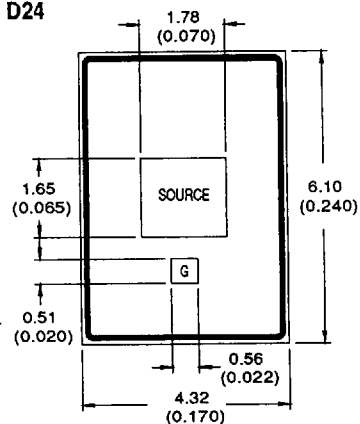
HEX-4: 400V, 500V & 600V, N-CHANNEL

D23



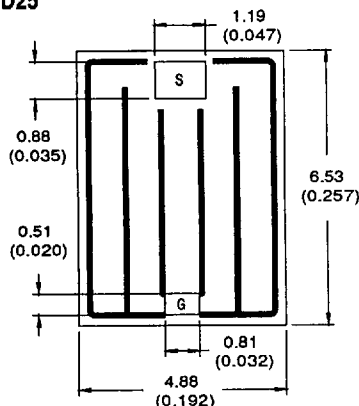
HEX-4: 800V, 900V & 1000V, N-CHANNEL

D24



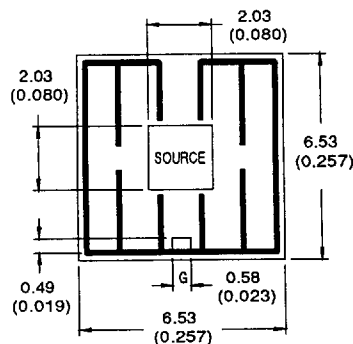
HEX-4.1: 60V, N-CHANNEL

D25



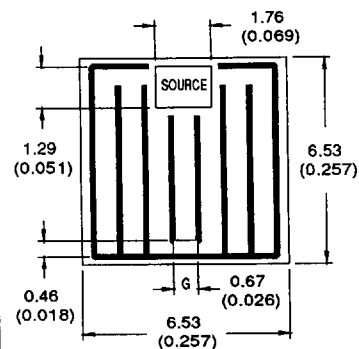
HEX-4.5: 500V, N-CHANNEL

D26



HEX-5: 60V, N-CHANNEL

D27



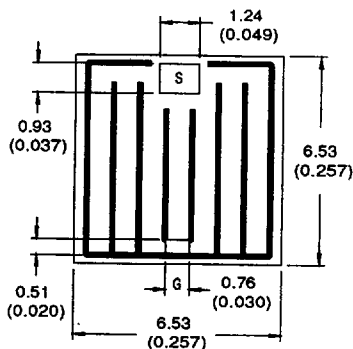
HEX-5: 100V, 200V, 250V, 400V & 500V N-CHANNEL

Appendix F

4855452 0016048 388 INR

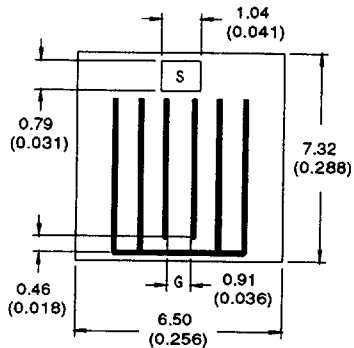
HEXFET Die Outlines

D28



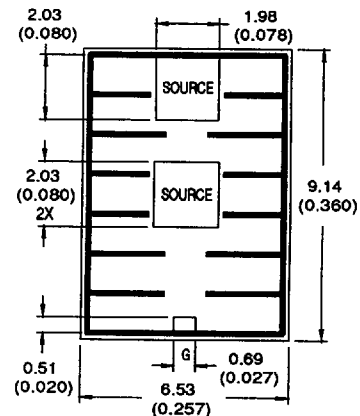
HEX-5: 600V, N-CHANNEL

D29



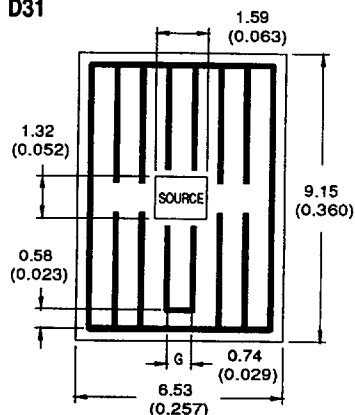
HEX-5: 800V, 900V & 1000V, N-CHANNEL

D30



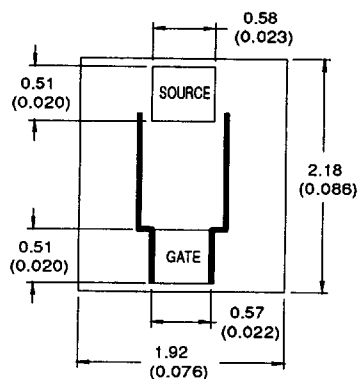
HEX-6: 60V, N-CHANNEL

D31



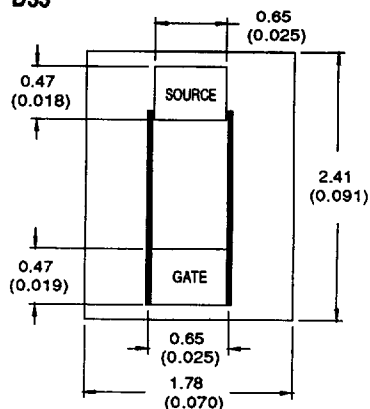
HEX-6: 400V & 500V, N-CHANNEL

D32



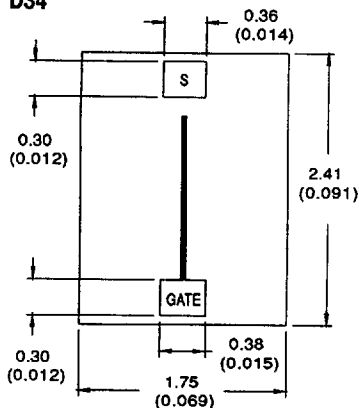
HEX-1: 60V, P-CHANNEL

D33



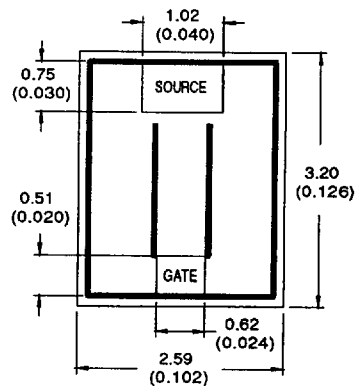
HEX-1: 100V, P-CHANNEL

D34



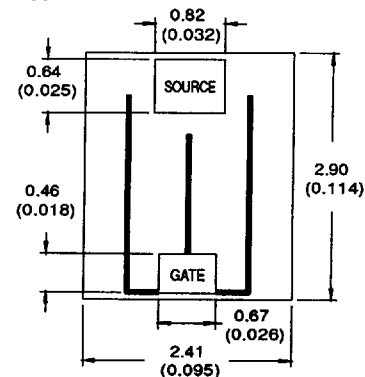
HEX-1: 200V, P-CHANNEL GEN 1

D35



HEX-2: 60V, P-CHANNEL

D36



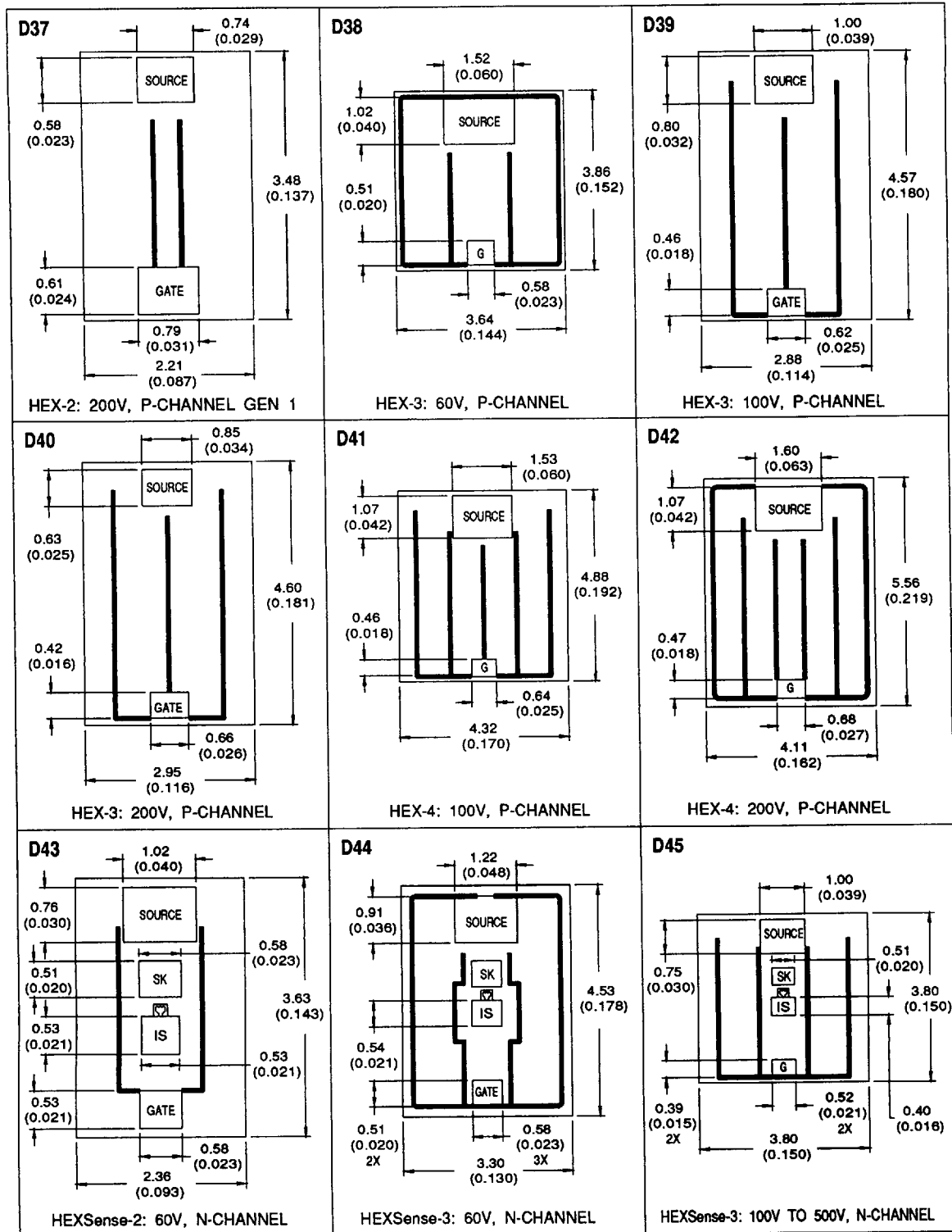
HEX-2: 100V, P-CHANNEL

HEXFET Die Outlines

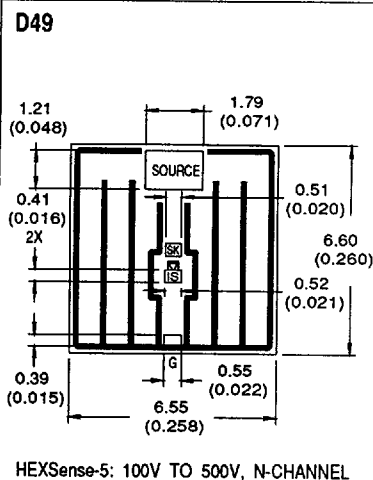
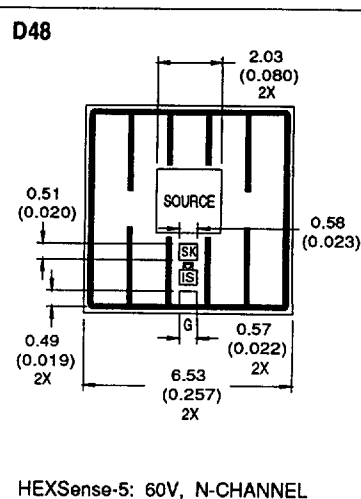
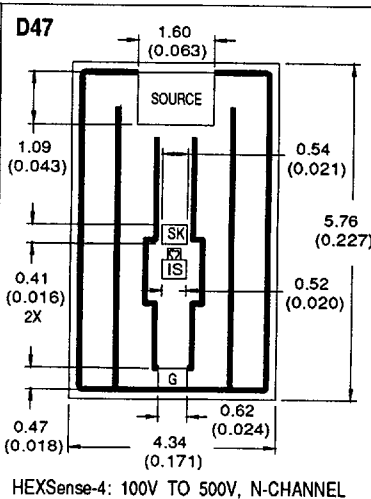
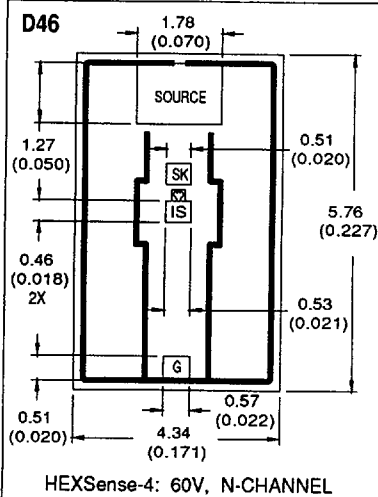
Appendix F

INTERNATIONAL RECTIFIER

APPENDICES



Appendix F



D50

D51

INTERNATIONAL RECTIFIER 6SE D

D52

- NOTES:
- 1 ALL DIMENSIONS ARE SHOWN IN MILLIMETERS (INCHES)
 - 2 CONTROLLING DIMENSION: (INCH).
 3. LETTER DESIGNATION:
S = SOURCE SK = SOURCE KELVIN
G = GATE IS = CURRENT SENSE
 4. DIMENSIONAL TOLERANCES:
BONDING PADS: < 0.635 TOLERANCE = +/- 0.013
WIDTH < (0.0250) TOLERANCE = +/- (0.0005)
& > 0.635 TOLERANCE = +/- 0.025
LENGTH > (0.0250) TOLERANCE = +/- (0.0010)
OVERALL DIE: < 1.270 TOLERANCE = +/- 0.102
WIDTH < (0.050) TOLERANCE = +/- (0.004)
& > 0.635 TOLERANCE = +/- 0.203
> (0.050) TOLERANCE = +/- (0.008)
 5. UNLESS OTHERWISE NOTED ALL DIE ARE GEN III