

N-CHANNEL ENHANCEMENT MOS FET

ABSOLUTE MAXIMUM RATINGS			
PARAMETER	SYMBOL		UNITS
Drain-source Volt.(1)	VDSS	600	Vdc
Drain-Gate Voltage (Res=1.0Mn) (1)	VDGR	600	Vdc
Gate-Source Voltage Continuous	VGS	±20	Vdc
Drain Current Continuous (Tc = 25°C)	ID	4.0	Adc
Drain Current Pulsed(3)	IDM	16	A
Total Power Dissipation	PD	75	W
Power Dissipation Derating > 25°C		0.6	W/°C
Operating & Storage Temp.	TJ/Tsig	-55 TO +150	°C
Thermal Resistance	RthJc	1.7	°C/W
Max. Lead temperature	TL	300	°C

ELECTRICAL CHARACTERISTICS Tc = 25°C (UNLESS OTHERWISE SPECIFIED)						
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Drain-source Breakdown Volt.	V(BR)DSS	VGS=0V ID=250 µA	600	-	-	V
Gate Threshold Voltage	VGS(TH)	VDS=VGS ID=250 µA	2.0	-	4.5	V
Gate Source Leakage	IGSS	VGS=±20 V	-	-	100	nA
Zero Gate Voltage Drain Current	IDSS	VDS=MAX. RATING VGS=0	-	-	250	µA
Static Drain-Source On-State Resistance(1)	RDS(ON)	VGS=10 V ID=2.0A	-	-	2.1	Ω
Forward Trans-Conductance (2)	gfs	VDS ≥ 15 V IDS=2.0A	2.5	-	-	S(U)
Input Capacitance	CISS		-	720	-	pF
Output Capacitance	COSS	VGS=0V VDS=25 V f=1.0 MHz	-	80	-	pF
Reverse Transfer Capacitance	CRSS		-	30	-	pF
Turn-On Delay	td(on)	VDD=300V Zo=20 n	-	-	30	ns
Rise Time	tr	ID=2.0A	-	-	35	ns
Turn-Off Delay	td(off)	(MOSFET switching times are essentially independent of operating temp.)	-	-	85	ns
Fall Time	tf		-	-	55	ns
Total Gate Charge (Gate-Source Plus Gate-Drain)	Qg	VGS=10V, ID=4.0A	-	-	40	nC
Gate-Source Charge	Qgs	VDS=0.8 MAX. RATING (Gate charge is essentially independent of the operating temperature)	-	-	10	nC
Gate-Drain ("Miller") Charge	Qgd		-	-	15	nC

SOURCE-DRAIN DIODE RATINGS & CHARACT. Tc = 25°C (UNLESS OTHERWISE SPECIFIED)						
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Continuous Source Current (Body Diode)	IS	Modified MOSFET symbol showing the integral reverse P-N junction rectifier (See schematic)	-	-	4.0	A
Pulse Source Current (Body Diode) (1)	ISM		-	-	16	A
Diode Forward Voltage (2)	VSD	IF=4.0A VGS=0V Tc=+25°C	-	-	1.5	V
Reverse Recovery Time	trr	Tc=+25° C IF=4.0A di/dt=100A/µS	-	600	-	ns

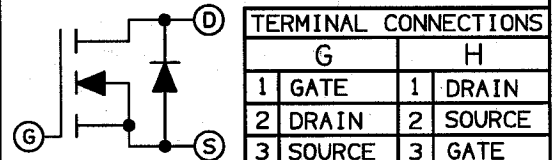
600V, 4.0A, 2.1Ω

SDF4N60 JAA
SDF4N60 JAB

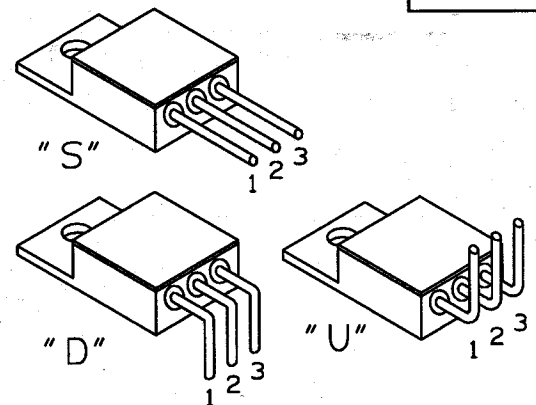
FEATURES

- RUGGED PACKAGE
- HI-REL CONSTRUCTION
- CERAMIC EYELETS
- LEAD BENDING OPTIONS
- COPPER CORED 52 ALLOY PINS
- LOW IR LOSSES
- LOW THERMAL RESISTANCE
- OPTIONAL MIL-S-19500 SCREENING

SCHEMATIC

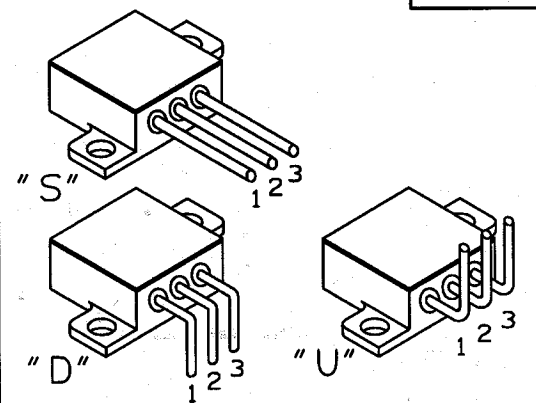


STANDARD BEND CONFIGURATIONS



(CUSTOM BEND OPTIONS AVAILABLE)

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(CUSTOM BEND OPTIONS AVAILABLE)

(1) TJ = 25°C to 150°C.
(2) Pulse test: Pulse Width < 300µS, Duty Cycle < 2%.
(3) Repetitive Rating: Pulse Width limited By Max. junction Temperature.