

ABSOLUTE MAXIMUM RATINGS			
PARAMETER	SYMBOL		UNITS
Drain-Source Volt.(1)	VDSS	800	Vdc
Drain-Gate Voltage (R _{GS} =1.0M Ω) (1)	VDGR	800	Vdc
Gate-Source Voltage Continuous	VGS	± 30	Vdc
Drain Current Continuous (T _c = 25°C)	ID	9.0	Adc
Drain Current Pulsed(3)	IDM	36.0	A
Total Power Dissipation	PD	240	W
Power Dissipation Derating > 25°C		1.2	W/°C
Operating & Storage Temp.	TJ/Tsig	-55 TO +150	°C
Thermal Resistance	RthJc	0.8	°C/W
Max.Lead temperature	TL	300	°C

ELECTRICAL CHARACTERISTICS T _c = 25°C (UNLESS OTHERWISE SPECIFIED)						
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Drain-source Breakdown Volt.	V(BR)DSS	VGS=0V ID=250 μ A	800	-	-	V
Gate Threshold Voltage	VGS(TH)	VDS=VGS ID=1 MA	2.0	-	4.0	V
Gate Source Leakage	IGSS	VGS= ± 30 V	-	-	100	nA
Zero Gate Voltage Drain Current	IDSS	VDS=MAX.RATING VGS=0	-	-	250	μ A
		VDS=0.8 MAX.RATING VGS=0 T _J =125°C	-	-	1000	μ A
Static Drain-Source On-State Resistance(1)	RDS(ON)	VGS=10V ID=4.5A	-	-	1.4	Ω
Input Capacitance	CISS	VGS=0V VDS=25 V f=1.0MHZ	-	2410	-	pF
Output Capacitance	COSS		-	370	-	pF
Reverse Transfer Capacitance	CRSS		-	120	-	pF
Turn-On Delay	t _{d(on)}	VDD=400V RG=1.8 Ω ID=9.0A VGS=15V	-	-	27	ns
Rise Time	t _r	(MOSFET switching times are essentially independent of operating temp.)	-	-	36	ns
Turn-Off Delay	t _{d(off)}		-	-	94	ns
Fall Time	t _f		-	-	48	ns
Total Gate Charge (Gate-Source Plus Gate-Drain)	Q _g	VGS=15V, ID=9.0A VDS=0.5 MAX.RATING (Gate charge is essentially independent of the operating temperature)	-	-	88	nC
Gate-Source Charge	Q _{gs}		-	-	8.9	nC
Gate-Drain ("Miller") Charge	Q _{gd}		-	-	44	nC

SOURCE-DRAIN DIODE RATINGS & CHARACT. T _c = 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)	-	-	9.0	A
Pulse Source Current (Body Diode) (1)	ISM		-	-	36	A
Diode Forward Voltage (2)	VSD	IF=9.0A VGS=0V T _c =+25°C	-	-	1.4	V
Reverse Recovery Time	t _{rr}	T _c =+25°C	-	-	656	ns
Reverse Recovery Charge	Q _{rr}	IF=9.0A di/dt=100A/ μ S	-	6.2	-	μ C

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

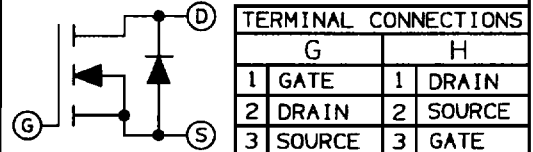
800V, 9.0A, 1.4 Ω

SDF9NA80 JAA
 SDF9NA80 JAB

FEATURES

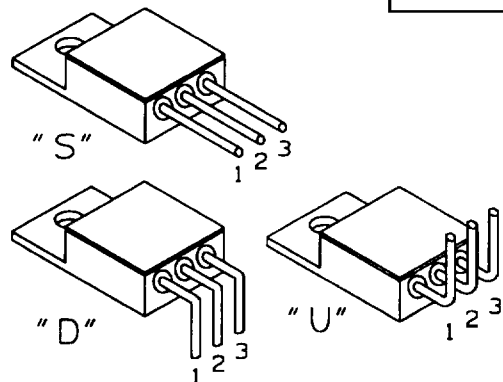
- RUGGED PACKAGE
- HI-REL CONSTRUCTION
- CERAMIC EYELETS
- LEAD BENDING OPTIONS
- COPPER CORED 52 ALLOY PINS
- LOW IR LOSSES
- LOW THERMAL RESISTANCE
- OPTIONAL MIL-S-19500 SCREENING (TX-S)

SCHEMATIC



STANDARD BEND CONFIGURATIONS

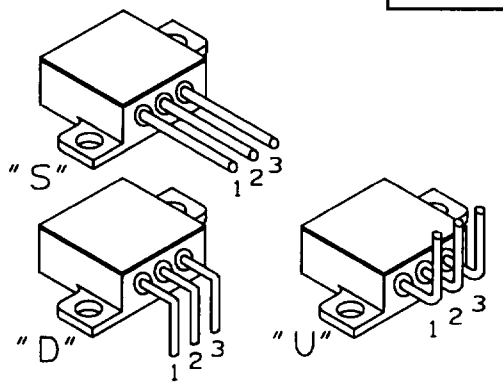
JAA



(CUSTOM BEND OPTIONS AVAILABLE)

STANDARD BEND CONFIGURATIONS

JAB



(CUSTOM BEND OPTIONS AVAILABLE)