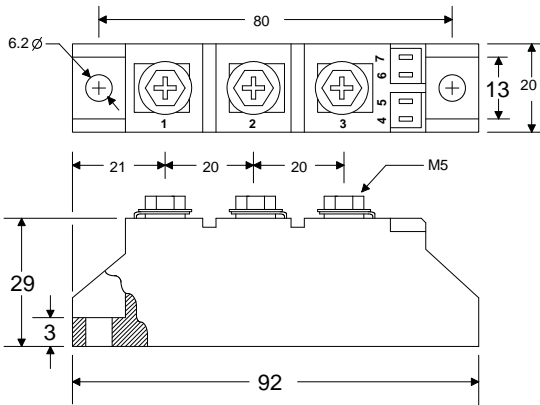


TO-240AA compatible package



MD circuit diagram



Short Form Data Sheet

Part number scheme

PS MD 91 N 12 KNX
1 2 3 4 5 6

- 1) Power Semiconductors initials
- 2) Circuit designation
- 3) Series number
- 4) Designates standard recovery time
- 5) Voltage Multiplier (example: 16 x 100 = 1600)
- 6) Proprietary suffix

Features:

- ✓ All diffused silicone.
- ✓ Module package compatible with JEDEC TO-240AA.
- ✓ Thick copper base plate.
- ✓ Isolated cooling, rated up to 3500 V_{RMS}
- ✓ Heat sink grounded.

Voltage

Parameter	Symbol	Rating	Units
Maximum Repetitive Reverse Voltage <small>Notes: 1, 3, 4, 5, 6</small>	V_{RRM}	1200 ~ 1800	Volts
Maximum non repetitive Surge of Reverse Voltage <small>Notes: 2, 3, 4, 5, 6</small>	V_{RSM}	$V_{RRM} + 100$	Volts
Maximum Non Repetitive Forward Voltage <small>Notes: 2,</small>	$V_{FM} @ I_{FM}$	1.4 @ 200	V @ A
<small>Note 1: T_J 25°C. Note 2: T_J 125°C. Note 3: Measured at the peak of the sine wave, Note 4: Below 0°C derate V_{RRM} 10%. Note 5: V_{RRM} have I_{RRM} of up to 20mA. Note 6: V_{RR} has typical I_{DR}, I_{RR} of 2~7mA. Note 7: For DC applications derate V_{RRM} 45%.</small>			
Specifying voltage:	1400V, PSMD91N14 1200V, PSMD91N12	1800V, PSMD91N18 Above 1800V inquire for availability.	

Amperage

Parameter	Symbol	Rating	Units
Maximum, Average Current <small>Notes: 3, 4</small>	$I_{F(AVE)}$	90	Amperes
Maximum, RMS Current <small>Notes: 3, 4</small>	$I_{F(RMS)}$	165	Amperes
Maximum non repetitive Surge Current with no reverse voltage reapplied. <small>Notes: 2, 4</small>	$I_{FSM} 0\% V_{RRM}$	1.8	kA
I_{RR} = Typical Repetitive, Reverse, Current. <small>Note: 1</small>	I_{RR}	3 ~ 7	mA
I_{RRM} = Maximum (threshold), Repetitive, Reverse, Current. <small>Note:1</small>	I_{RRM}	30	mA
Fuse's absolute maximum $I^2 t$ with no reverse voltage reapplied <small>Note: 2, 4</small>	$I^2 t, 0\% V_{RR}$	4.5	kA
Fuse's absolute maximum $I^2 t$ with 100% reverse voltage reapplied <small>Note: 2, 4</small>	$I^2 t, 100\% V_{RR}$	3.2	kA
Reverse Recovery Charge (C_S = Stored Charge)	Q_{RR}	Consult factory	μC_S
<small>Note 1: T_J 25°C. Note 2: T_J 125°C. Note 3: T_{Case} 55°C air cooled. Note 4: 180° conduction, 60Hz sine wave.</small>			

Thermal & Weight

Parameter	Symbol	Rating	Units
Operating Temperature Range	T_J	-40° ~ 180°	°Celsius
Maximum Thermal resistance, Junction to Case <small>Notes:1,2</small>	R_{th-J-C}	0.15	°C/W
Maximum Thermal resistance, Case to Heat Sink <small>Notes: 1, 2</small>	$R_{th-C-hs}$	0.15	°C/W
Weight		120	Grams
		4.2	oz.
<small>Note 1: Mounting surfaces flat and greased Note 2: 180° conduction, 60Hz sine wave.</small>			