



Short Form Data Sheet

Part number scheme

PS **KD** **500** **N 16** **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.
- ✓ 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 @ 1000	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, PSKD500N14		1800V, PSKD500N18	
1200V, PSKD500N12		Above 1800V inquire for availability.	

Amperage

Parameter	Symbol	Rating	Units
Maximum, Average Current <small>Notes: 3, 4</small>	I _{F(AVE)}	500	Amperes
Maximum, RMS Current <small>Notes: 3, 4</small>	I _{F(RMS)}	785	Amperes
Maximum non repetitive Surge Current with no reverse voltage reappplied. <small>Notes: 2, 4</small>	I _{FSM} 0% V _{RRM}	15.7	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 reappplied <small>Note: 2, 4</small>	I ² t, 0% V _{RR}	14.5	kA
Fuse's absolute maximum I ² t with 100% reverse voltage reappplied <small>Note: 2, 4</small>	I ² t, 100% V _{RR}	10.3	kA
<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}	0.03	°C/W
Maximum Thermal resistance, Case to Heat Sink <small>Notes: 1, 2</small>	R _{th-C-hs}	0.1	°C/W
Weight		1,504	Grams
		53	oz.
<small>Note 1: Mounting surfaces flat and greased Note 2: 180° conduction, 60Hz sine wave.</small>			