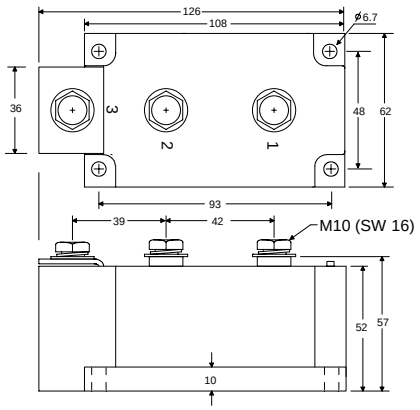
500 series package



KD circuit diagram

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 Notes: 1, 3, 4, 5, 6	V_{RRM}	1200 ~ 1800	Volts
Maximum non repetitive Surge of Reverse Voltage Notes: 2, 3, 4, 5, 6	V_{RSM}	V_{RRM} + 100	Volts
Maximum Non Repetitive Forward Voltage Notes: 2,	V_{FM} @ I_{FM}	1.4 @ 1000	V @ A
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%.			
Specifying voltage: 1400V, PSKD500N14 1800V, PSKD500N18 1200V, PSKD500N12 1600V, PSKD500N16 Above 1800V inquire for availability.			

Amperage

Parameter	Symbol	Rating	Units
Maximum, Average Current Notes: 3, 4	$I_{F(AVE)}$	500	Amperes
Maximum, RMS Current Notes: 3, 4	$I_{F(RMS)}$	785	Amperes
Maximum non repetitive Surge Current with no reverse voltage reapplied. Notes: 2, 4	I_{FSM} 0%V_{RRM}	15.7	kA
I_{RR} = Typical Repetitive, Reverse, Current. Note: 1	I_{RR}	3 ~ 7	mA
I_{RRM} = Maximum (threshold), Repetitive, Reverse, Current. Note:1	I_{RRM}	30	mA
Fuse's absolute maximum I^2t with no reverse voltage reapplied Note: 2, 4	I^2t, 0% V_{RR}	14.5	kA
Fuse's absolute maximum I^2t with 100% reverse voltage reapplied Note: 2, 4	I^2t, 100% V_{RR}	10.3	kA
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.			

Thermal & Weight

Parameter	Symbol	Rating	Units
Operating Temperature Range	T_J	-40° ~ 180°	°Celsius
Maximum Thermal resistance, Junction to Case Notes:1, 2	$R_{th\text{-}J\text{-}C}$	0.03	°C/W
Maximum Thermal resistance, Case to Heat Sink Notes: 1, 2	$R_{th\text{-}C\text{-}hs}$	0.1	°C/W
Weight		1,504	Grams
		53	oz.
Note 1: Mounting surfaces flat and greased Note 2: 180° conduction, 60Hz sine wave.			