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RoHS 2002/95/EC

NTE6218
Dual Diode Rectifier Module
Ultra Fast, Soft Recovery
600V, 200A (100A/Leg), Common Cathode

Features:
- Monolithic Dual Diode Construction
- Low Leakage Current
- Low Forward Voltage
- +150°C Operating Junction Temperature

Absolute Maximum Ratings:

Peak Repetitive Reverse Voltage, V_{RRM} 600V
Working Peak Reverse Voltage, V_{RWM} 600V
DC Blocking Voltage, V_R 600V
Average Rectified Forward Current (At Rated V_R, T_C = +90°C), I_O
  Per Leg 100A
  Per Package 200A
Non–Repetitive Peak Surge Current (Per Leg), I_{FSM}
  (Surge Applied at Rated Load Conditions, Halfwave, Single Phase, 60Hz) 2000A

Thermal and Mechanical Characteristics: (Note 1)

Operating Case Temperature Range, T_C . . . . . –55° to +150°C
Operating Junction Temperature Range, T_J . . . . . –55° to +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C
Maximum Thermal Resistance, Junction–to–Case (Per Leg), R_{thJC} . . . . . 0.30°C/W
Maximum Top Terminal Torque . . . . . 2.8 to 4.5Nm
Maximum Mounting Torque
  Outside Holes . . . . . 3.4 to 4.5Nm
  Center Holes . . . . . 0.9 to 1.1Nm
Seating Plane Flatness (Between Mounting Holes) . . . . . 1mil per inch

Note 1. While the NTE6218 is capable of sustaining these vertical and levered tensions, the intimate contact between the package and heat may be lost. This could lead to thermal runaway. The use of very flexible leads is recommended for the anode connections. Use of thermal grease is highly recommended.

Electrical Characteristics:

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Maximum Instantaneous Forward Voltage	V_F	Per Leg, T_C = +25°C Note 2	I_F = 100A	–	1.15	1.30	V
			I_F = 200A	–	1.30	1.45	V
Maximum Instantaneous Reverse Current	I_R	Per Leg, V_R = 400V	T_C = +25°C	–	–	5	μA
			T_C = +125°C	–	–	200	μA
Typical Reverse Recovery Time	t_{rr}	I_F = 0.5A, I_R = 1A, I_{RR} = 0.25A		–	70	95	ns

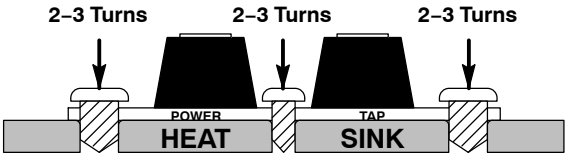
Note 2. Pulse Test: Pulse Width 300μs, Duty Cycle ≤ 2%.

Mounting Procedure

The NTE6218 package requires special mounting considerations because of the long longitudinal axis of the copper heat sink. It is important to follow the proper tightening sequence to avoid warping the heat sink which can reduce thermal contact between the NTE6218 and the heat sink.

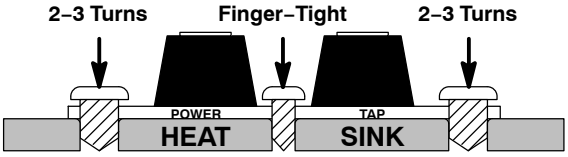
Step 1:

Locate the NTE6218 on the heat sink and start mounting bolts into the threads by hand (2 or 3 turns).



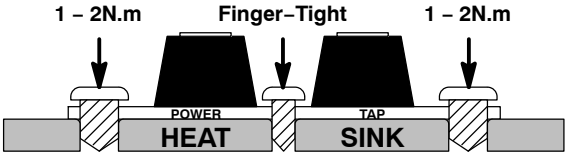
Step 2:

Finger tighten the center bolt. The bolt may catch on the threads of the heat sink so it is important to make sure the face of the bolt or washer is in contact with the surface of the NTE6218.



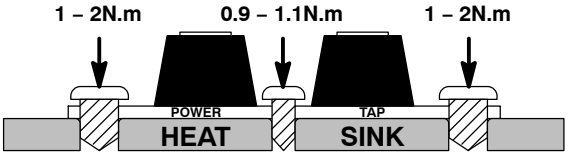
Step 3:

Tighten each of the end bolts between 1 to 2N.m.



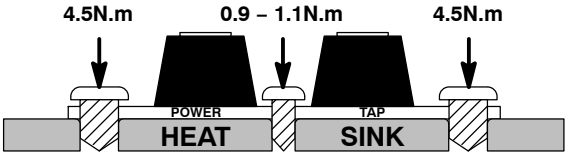
Step 4:

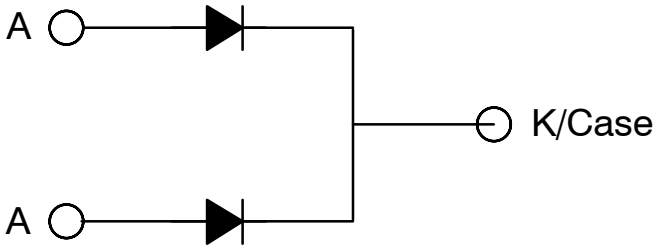
Tighten the center bolt between 0.9 to 1.1N.m.

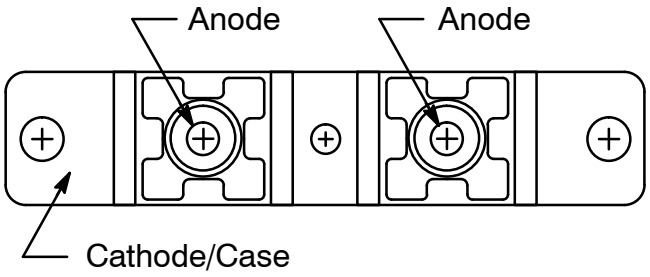


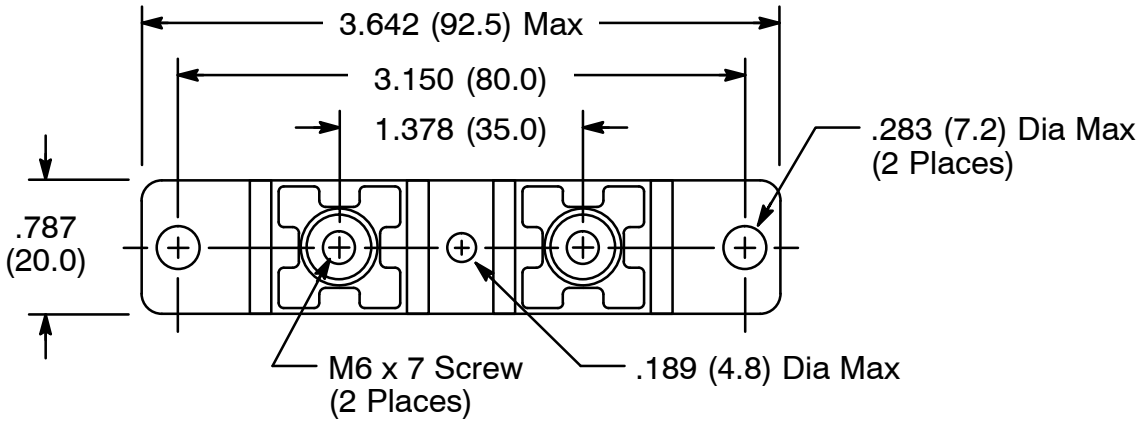
Step 5:

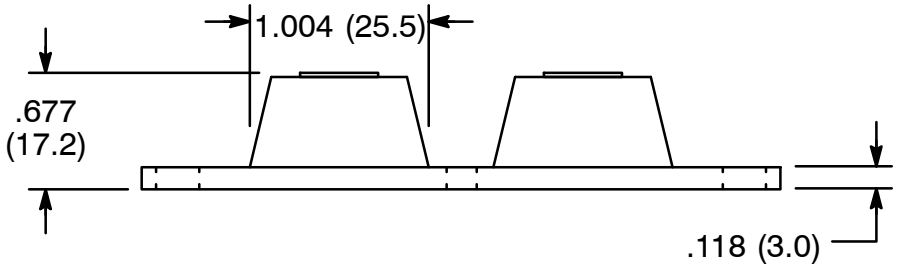
Finally, tighten the end bolts to 4.5N.m.




A
A
K/Case


Anode
Anode
Cathode/Case


3.642 (92.5) Max
3.150 (80.0)
1.378 (35.0)
.283 (7.2) Dia Max
(2 Places)
.787
(20.0)
M6 x 7 Screw
(2 Places)
.189 (4.8) Dia Max


1.004 (25.5)
.677
(17.2)
.118 (3.0)