ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089
http://www.nteinc.com

NTE6234
High Power Diode Module

Features:
- International Standard Package
- Direct Copper Bonded Al_2O_3 Ceramic Base Plate
- Planer Passivated Chips
- Isolation Voltage: 3600V~

Applications:
- Supplies for DC Power Equipment
- DC Supply for PWM Inverter
- Field Supply for DC Motors
- Battery DC Power Supplies

Advantages:
- Space and Weight savings
- Simple Mounting
- Improved Temperature and Power Cycling
- Reduced Protection Circuits

Maximum Ratings:

Repetitive Reverse Blocking Voltage, V_{RRM} 1600V
Non–Repetitive Reverse Blocking Voltage, V_{RSM} 1700V
RMS Forward Current (Per Diode, T_{VJ} = +150°C), $I_{F(RMS)}$ 300A
Average Forward Current (Per Diode, T_C = +100°C, 180° Sine), $I_{F(AV)}$ 190A
Surge Forward Current (V_R = 0), I_{FSM}
T_{VJ} = +45°C
t = 10ms (50Hz), Sine 6600A
t = 8.3ms (60Hz), Sine 7290A
T_{VJ} = +150°C
t = 10ms (50Hz), Sine 5600A
t = 8.3ms (60Hz), Sine 6200A
I^2t for Fusing Coordination (V_R = 0), I^2dt
T_{VJ} = +45°C
t = 10ms (50Hz), Sine . . . . . 218000A^2s
t = 8.3ms (60Hz), Sine . . . . . 221000A^2s
T_{VJ} = +150°C
t = 10ms (50Hz), Sine . . . . . 157000A^2s
t = 8.3ms (60Hz), Sine . . . . . 160000A^2s

Maximum Ratings (Cont'd):

RMS Isolation Voltage (50/60Hz, RMS, $I_{ISOL} \leq 1mA$), V_{ISOL}
- t = 1 Min 3000V
- t = 1s 3600V

Virtual Junction Temperature Range, T_{VJ} . . . . . –40° to +150°C
Peak Virtual Junction Temperature, T_{VJM} . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –40° to +125°C
Thermal Resistance, Junction–to–Case, R_{thJC}
- Per Diode, DC Current 0.21K/W
- Per Module 0.105K/W

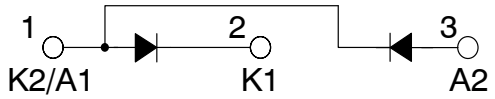
Thermal Resistance, Junction–to–Heat Sink, R_{thJK}
- Per Diode, DC Current 0.31K/W
- Per Module 0.155K/W

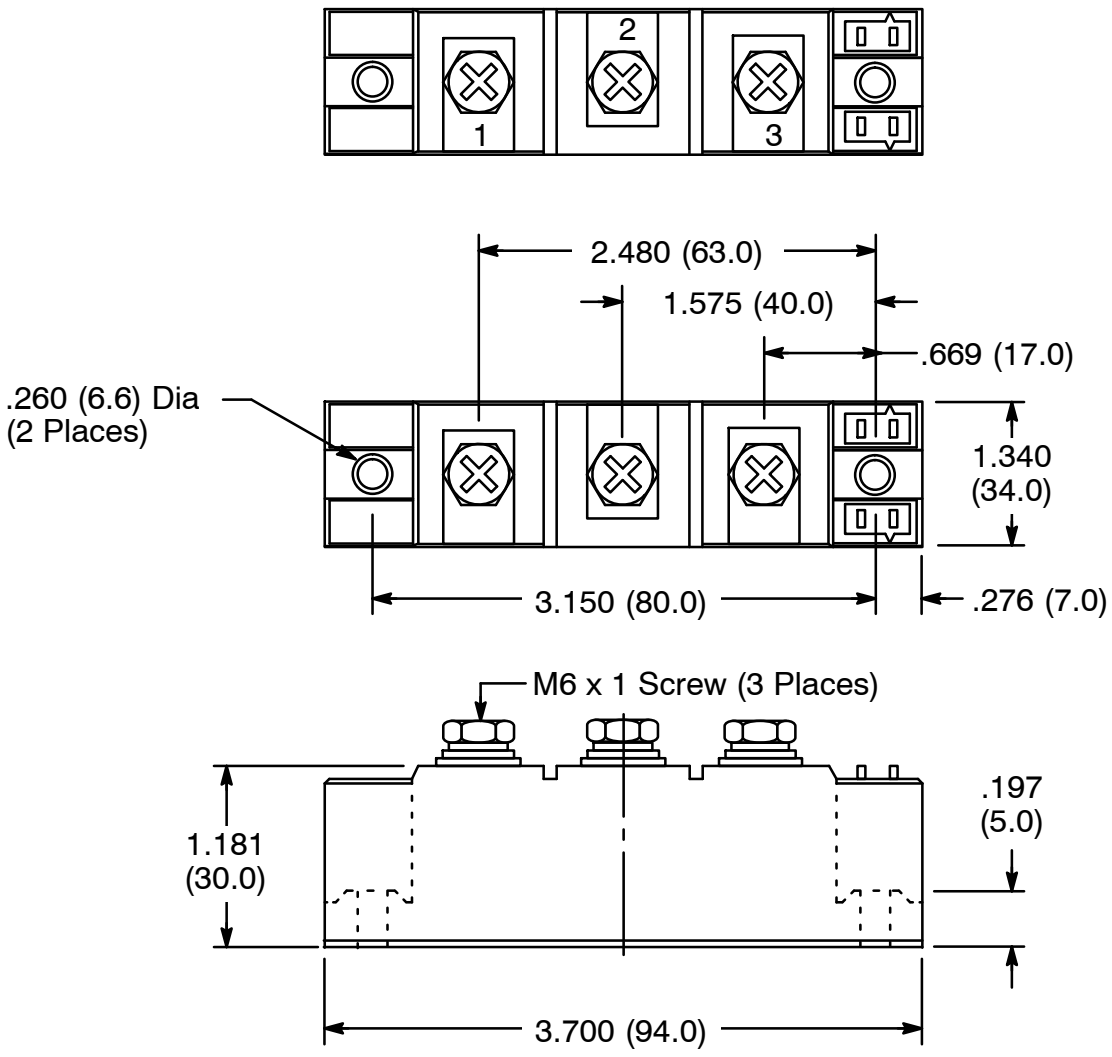
Mounting Torque (M6), M_d . . . . . 2.25 to 2.75Nm
Terminal Connection Torque (M6), M_d . . . . . 4.5 to 5.5Nm
Creepage Distance on Surface, d_S 12.7mm
Striking Distance Through Air, d_A 9.8mm
Maximum Allowable Acceleration, a . . . . . 50m/s^2

Electrical Characteristics:

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Current	I_R	V_R = 1600V, T_{VJ} = +150°C	–	–	20	mA
Forward Voltage Drop	V_F	I_F = 300A, T_{VJ} = +25°C	–	–	1.15	V
Threshold Voltage	V_{TO}	I_F = 300A, T_{VJ} = +25°C, For Power–Loss Calculations Only	–	–	0.8V	V
Forward Slope Resistance	r_T		–	–	0.8	mΩ
	Q_s	I_F = 300A –di/dt = 50A/μs, T_{VJ} = +125°C	–	–	550	μC
RMS Current	I_{RM}		–	–	235	A

Circuit Diagram




2
1
3
2.480 (63.0)
1.575 (40.0)
.669 (17.0)
.260 (6.6) Dia
(2 Places)
1.340
(34.0)
3.150 (80.0)
.276 (7.0)
M6 x 1 Screw (3 Places)
1.181
(30.0)
.197
(5.0)
3.700 (94.0)