ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
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NTE2967
MOSFET
N–Channel, Enhancement Mode
High Speed Switch

Applications:

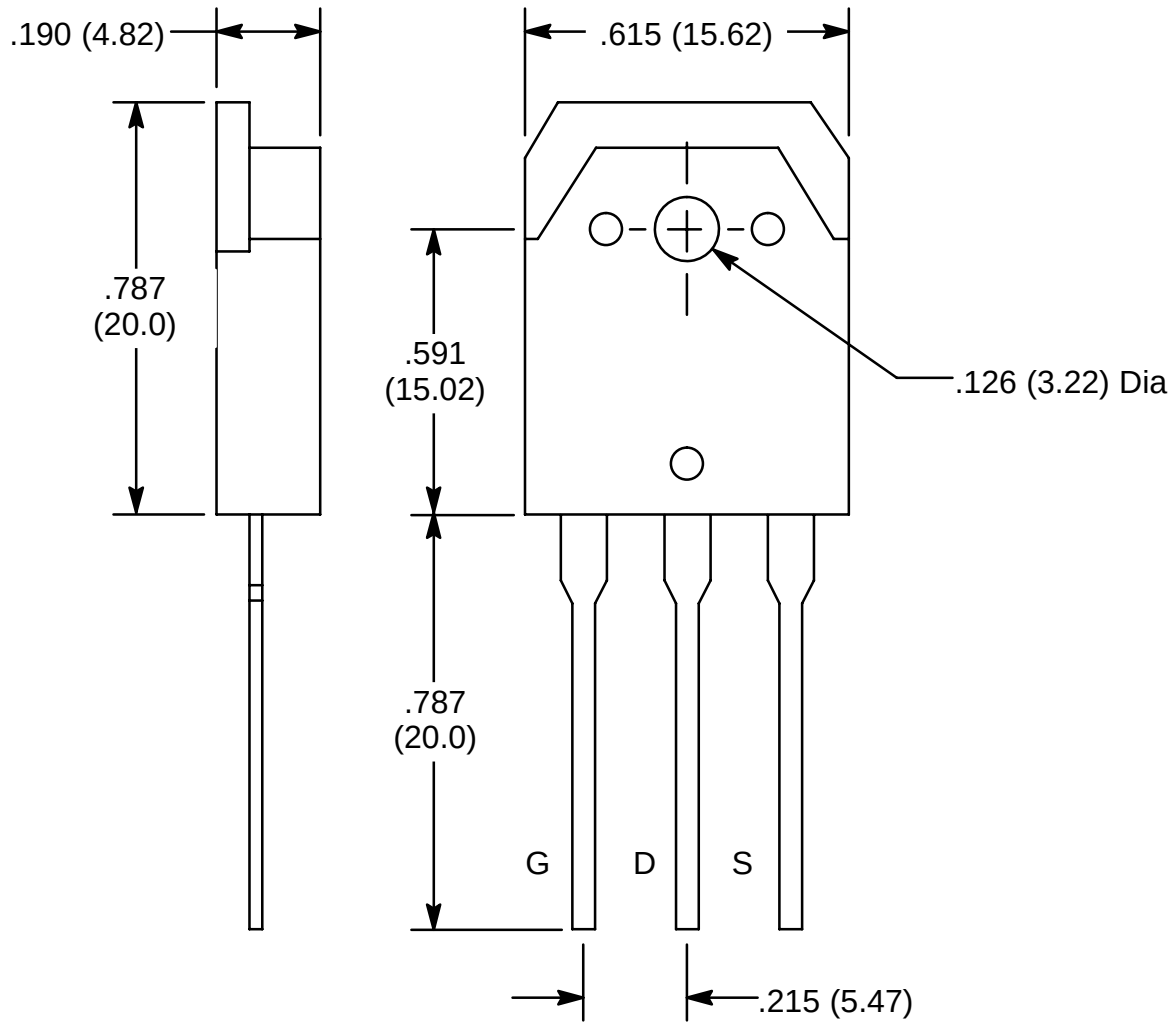
- Motor Control
- Lamp Control
- Solenoid Control
- DC–DC Converter

Absolute Maximum Ratings: (T_C = +25°C unless otherwise specified)

Drain–Source Voltage (V_{GS} = 0V), V_{DSS} 100V
Gate–Source Voltage (V_{DS} = 0V), V_{GS} . . . . . ±20V
Drain Current, I_D
  Continuous 70A
  Pulsed 280A
Avalanche Drain Current (Pulsed, L = 100µH), I_{DA} 70A
Source Current, I_S
  Continuous 70A
  Pulsed 280A
Maximum Power Dissipation, P_D 150W
Channel Temperature Range, T_{ch} . . . . . –55° to +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C
Thermal Resistance, Channel–to–Case, $R_{th(ch–c)}$ . . . . . 0.83°C/W

Electrical Characteristics: (T_{ch} = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	V_{DS} = 0V, I_D = 1mA	100	–	–	V
Gate–Source Leakage	I_{GSS}	V_{GS} = ±20V, V_{DS} = 0V	–	–	±0.1	µA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 100V, V_{GS} = 0	–	–	0.1	mA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = 10V, I_D = 1mA	2.0	3.0	4.0	V
Static Drain–Source ON Resistance	$R_{DS(on)}$	V_{GS} = 10V, I_D = 35A	–	14	20	mΩ
Drain–Source On–State Voltage	$V_{DS(on)}$	V_{GS} = 10V, I_D = 35A	–	0.49	0.70	V
Forward Transfer Admittance	$\|y_{fs}\|$	V_{GS} = 10V, I_D = 35A	–	53	–	S

Electrical Characteristics (Cont'd): (T_{ch} = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}	V_{GS} = 0V, V_{DS} = 10V, f = 1MHz	–	6540	–	pF
Output Capacitance	C_{oss}		–	1150	–	pF
Reverse Transfer Capacitance	C_{rss}		–	500	–	pF
Turn–On Delay Time	$t_{d(on)}$	V_{DD} = 50V, I_D = 35A, V_{GS} = 10V, R_{GEN} = R_{GS} = 50Ω	–	95	–	ns
Rise Time	t_r		–	175	–	ns
Turn–Off Delay Time	$t_{d(off)}$		–	330	–	ns
Fall Time	t_f		–	190	–	ns
Diode Forward Voltage	V_{SD}	I_S = 35A, V_{GS} = 0V	–	1.0	1.5	V
Reverse Recovery Time	t_{rr}	I_S = 70A, dI_F/dt = 100A/µs	–	120	–	ns