NTE2953
MOSFET
N–Channel, Enhancement Mode
High Speed Switch
TO–220 Full Pack Type Package

Applications:

- AC–to–DC Power Supply Equipment
- Motor Control
- Server Power Supplies
- Synchronous Rectification
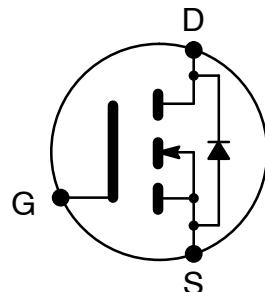
Absolute Maximum Ratings:

Drain–Source Voltage (+25°C ≤ T_J ≤ +175°C), V_{DS} 100V

Drain–Gate Voltage (+25°C ≤ T_J ≤ +175°C, R_{GS} = 20kΩ), V_{DSR} 100V

Gate–Source Voltage, V_{GS} . . . . ±20V

Drain Current, I_D
  (V_{GS} = 10V, T_{mb} = +25°C) 70.4A
  (V_{GS} = 10V, T_{mb} = +100°C) 49.7A

Peak Drain Current (Pulsed, t_p ≤ 10μs, T_{mb} = +25°C), I_{DM} 281A

Source Current (T_{mb} = +25°C), I_S 53.2A

Peak Source Current (Pulsed, t_p ≤ 10μs, T_{mb} = +25°C), I_{SM} 281A

Non–Repetitive Drain–Source Avalanche Energy, $E_{DS(AL)S}$
  (V_{GS} = 10V, $T_{J(init)}$ = +25°C, I_D = 70.4A, V_{sup} ≤ 100V, Unclamped, R_{GS} = 50Ω) 673mJ

Total Power Dissipation (T_{mb} = +25°C), P_D 63.8W

Junction Temperature Range, T_J . . . . –55° to +175°C

Storage Temperature Range, T_{stg} . . . . –55° to +175°C

Peak Soldering Temperature, $T_{sld(M)}$ . . . . +260°C

Maximum Thermal Resistance, Junction–to–Mounting Base, $R_{th(j-mb)}$ 2.35K/W

Typical Thermal Resistance, Junction–to–Ambient, $R_{th(j-a)}$ 55K/W

Isolation Capacitance (f = 1Mhz), C_{isol} 10pF

RMS Isolation Voltage, $V_{isol(RMS)}$
  (50Hz ≤ f ≤ 60Hz, RH ≤ 65%, Sinusoidal Waveform, Clean and Dust Free) 2500V

Electrical Characteristics:

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V$, $I_D = 250\mu A$, $T_J = +25°C$	100	–	–	V
		$V_{GS} = 0V$, $I_D = 250\mu A$, $T_J = -55°C$	90	–	–	V
Gate–Source Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 1mA$, $T_J = +25°C$	2.0	3.0	4.0	V
		$V_{DS} = V_{GS}$, $I_D = 1mA$, $T_J = +175°C$	1.0	–	–	V
		$V_{DS} = V_{GS}$, $I_D = 1mA$, $T_J = -55°C$	–	–	4.6	V
Drain Leakage Current	I_{DSS}	$V_{DS} = 100V$, $V_{GS} = 0$, $T_J = +25°C$	–	–	10	μA
		$V_{DS} = 100V$, $V_{GS} = 0$, $T_J = +100°C$	–	–	200	μA
Gate Leakage Current	I_{GSS}	$V_{GS} = \pm20V$, $V_{DS} = 0V$, $T_J = +25°C$	–	2	100	nA
Drain–Source ON–State Resistance	$R_{DS(on)}$	$V_{GS} = 10V$, $I_D = 15A$, $T_J = +25°C$	–	3.95	4.6	$m\Omega$
		$V_{GS} = 10V$, $I_D = 15A$, $T_J = +100°C$	–	6.9	8.1	$m\Omega$
		$V_{GS} = 10V$, $I_D = 15A$, $T_J = +175°C$	–	11.05	12.9	$m\Omega$
Internal Gate Resistance (AC)	R_G	$f = 1MHz$	–	0.9	–	Ω
Dynamic Characteristics						
Total Gate Charge	$Q_{G(tot)}$	$V_{GS} = 10V$, $V_{DS} = 50V$, $I_D = 15A$	–	153	–	nC
Gate–Source Charge	Q_{GS}		–	28	–	nC
Pre-Threshold Gate-Source Charge	$Q_{GS(th)}$		–	25	–	nC
Post-Threshold Gate-Source Charge	$Q_{GS(th-pl)}$		–	3	–	nC
Gate–Drain Charge	Q_{GD}		–	40	–	nC
Gate–Source Plateau Voltage	$V_{GS(pl)}$	$V_{DS} = 50V$, $I_D = 15A$	–	3.5	–	V
Input Capacitance	C_{iss}	$V_{GS} = 0V$, $V_{DS} = 50V$, $f = 1MHz$, $T_J = +25°C$	–	9900	–	pF
Output Capacitance	C_{oss}		–	660	–	pF
Reverse Transfer Capacitance	C_{rss}		–	381	–	pF
Turn–On Delay Time	$t_{d(on)}$	$V_{DS} = 50V$, $R_L = 4\Omega$, $V_{GS} = 10V$, $R_{G(ext)} = 4.7\Omega$, $T_J = +25°C$	–	35	–	ns
Rise Time	t_r		–	40	–	ns
Turn–Off Delay Time	$t_{d(off)}$		–	170	–	ns
Fall Time	t_f		–	71	–	ns
Source–Drain Diode						
Source–Drain Voltage	V_{SD}	$I_S = 10A$, $V_{GS} = 0V$, $T_J = +25°C$	–	0.72	1.2	V
Reverse Recovery Time	t_{rr}	$I_S = 10A$, $dI_S/dt = -100A/\mu s$	–	63	–	ns
Recovered Charge	Q_r	$V_{GS} = 0$, $V_{DS} = 50V$	–	173	–	nC

.181 (4.6)
Max

.126 (3.2) Dia Max

.114 (2.9)

.405 (10.3)
Max

Isol

.252
(6.4)

G   D   S

.622
(15.0)
Max

.118
(3.0)
Max

.531
(13.5)
Min

.098 (2.5)

.100 (2.54)
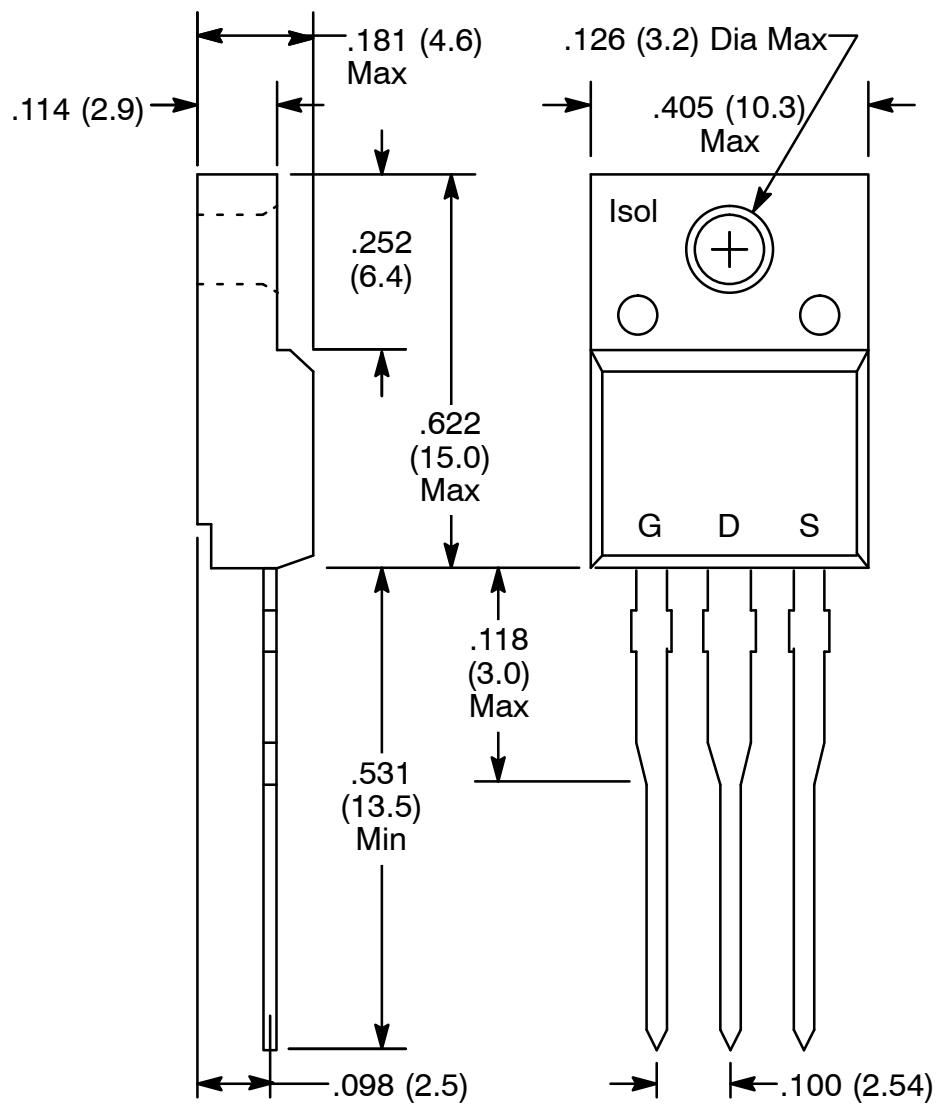
X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for MOSFET *category:*

Click to view products by NTE *manufacturer:*

Other Similar products are found below :

614233C 648584F MCH3443-TL-E MCH6422-TL-E FDPF9N50NZ FW216A-TL-2W FW231A-TL-E APT5010JVR NTNS3A92PZT5G IRF100S201 JANTX2N5237 2SK2464-TL-E 2SK3818-DL-E FCA20N60_F109 FDZ595PZ STD6600NT4G FSS804-TL-E 2SJ277-DL-E 2SK1691-DL-E 2SK2545(Q,T) 405094E 423220D MCH6646-TL-E TPCC8103,L1Q(CM 367-8430-0972-503 VN1206L 424134F 026935X 051075F SBVS138LT1G 614234A 715780A NTNS3166NZT5G 751625C 873612G IRF7380TRHR IPS70R2K0CEAKMA1 RJK60S3DPP-E0#T2 RJK60S5DPK-M0#T0 APT5010JVFR APT12031JFLL APT12040JVR DMN3404LQ-7 NTE6400 JANTX2N6796U JANTX2N6784U JANTXV2N5416U4 SQM110N05-06L-GE3 SIHF35N60E-GE3 2SK2614(TE16L1,Q)