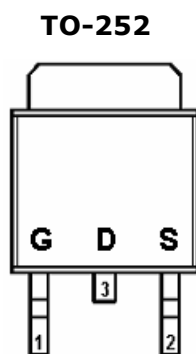


DESCRIPTION

STN36N10D is used trench technology to provide excellent RDS(on) and gate charge. Those devices are suitable for use as load switch or in PWM applications.

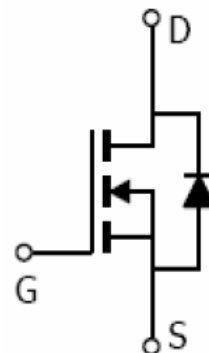
PIN CONFIGURATION



FEATURE

- 100V/20.0A, $R_{DS(ON)} = 40m\Omega$ (Typ.) @ $V_{GS} = 10V$
- 100V/20.0A, $R_{DS(ON)} = 42m\Omega$ @ $V_{GS} = 4.5V$
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability
- TO-252, TO-251 package design

PART MARKING



Y: Year Code
A: Date Code
Q: Process Code

**ST36N10D**

N Channel Enhancement Mode MOSFET

36.0A

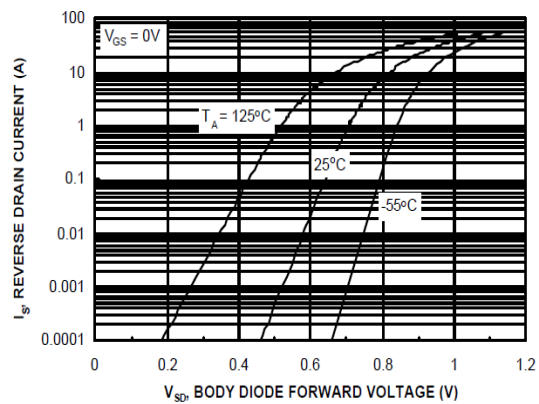
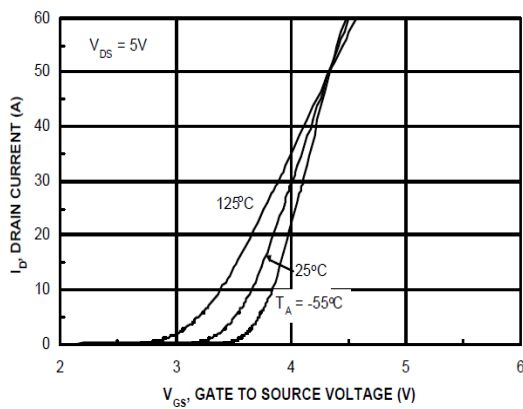
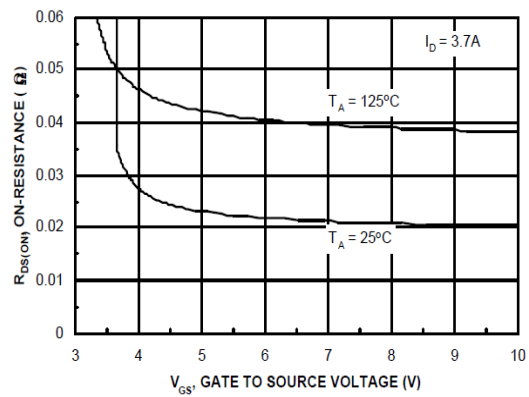
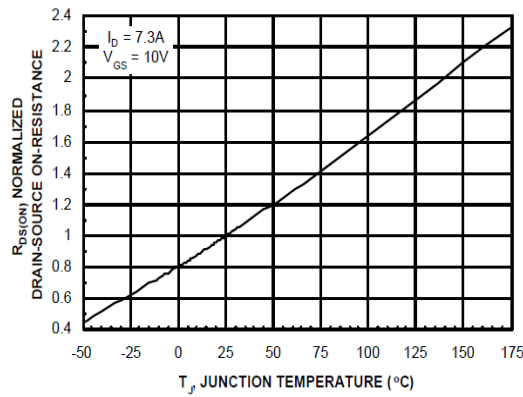
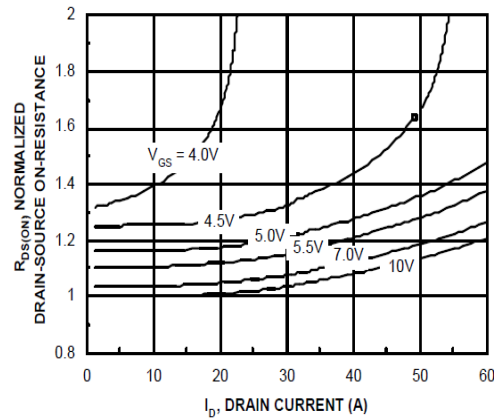
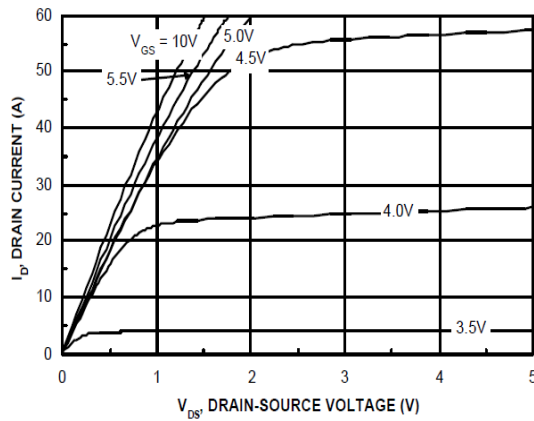
ABSOLUTE MAXIMUM RATINGS (Ta = 25°C Unless otherwise noted)

Parameter	Symbol	Typical	Unit
Drain-Source Voltage	VDSS	100	V
Gate-Source Voltage	VGSS	±20	V
Continuous Drain Current (TJ=150°C)	ID	36.0 14.0	A
Pulsed Drain Current	IDM	100	A
Continuous Source Current (Diode Conduction)	IS	2.7	A
Power Dissipation	PD	83 30	W
Operation Junction Temperature	TJ	175	°C
Storage Temperature Range	TSTG	-55/175	°C
Thermal Resistance-Junction to Ambient	RθJA	95	°C/W

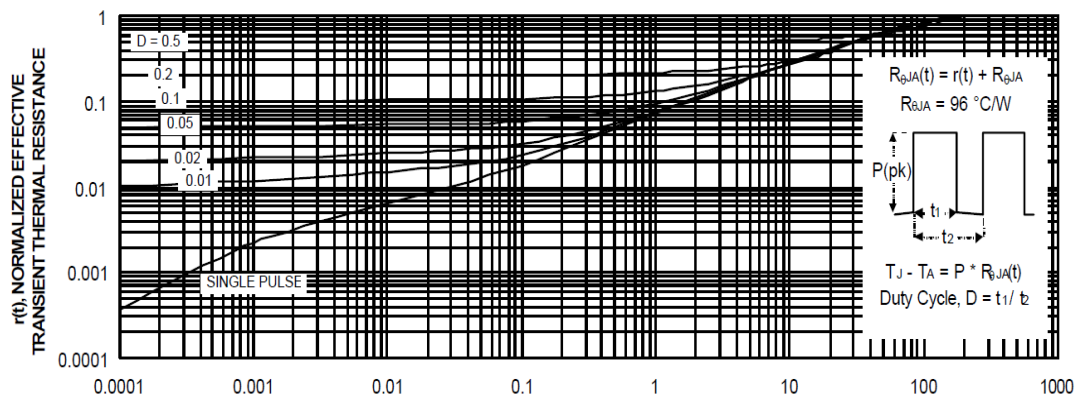
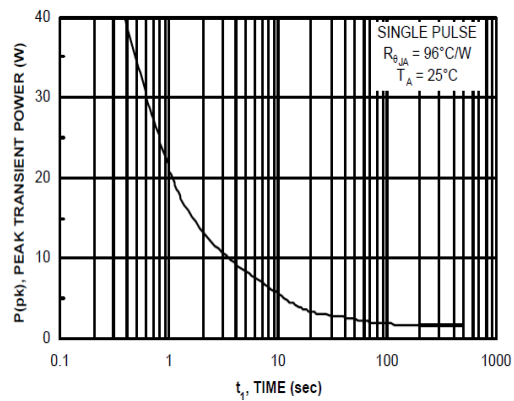
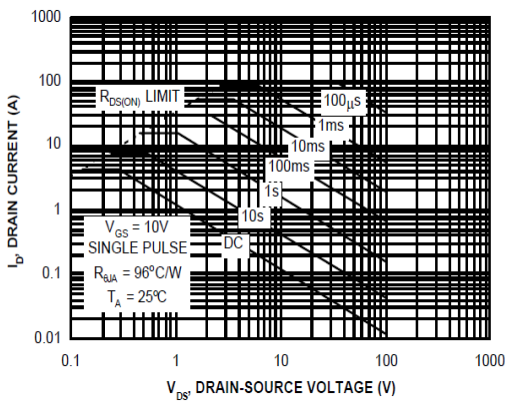
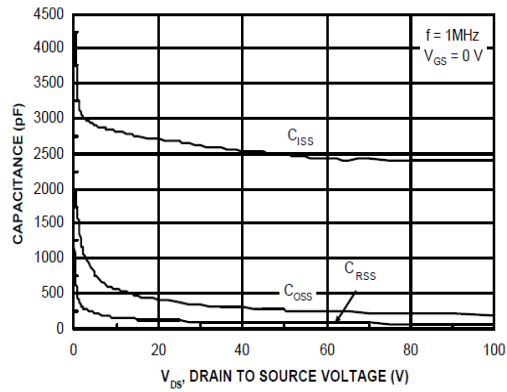
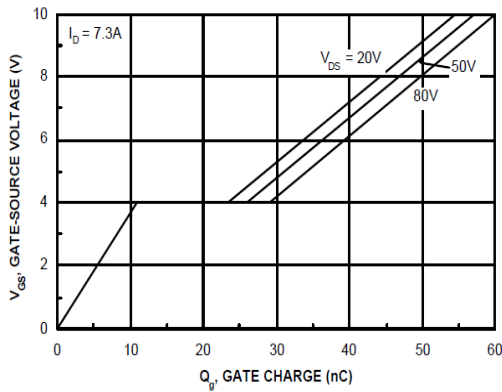
ELECTRICAL CHARACTERISTICS (Ta = 25°C Unless otherwise noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250mA$	100			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1		3	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=80V, V_{GS}=0V$			10	nA
Gate leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=20V$			100	uA
		$V_{DS}=0V, V_{GS}=-20V$			-100	
Drain-source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=20A$		40	48	mΩ
		$V_{GS}=4.5V, I_D=20A$		42	52	
Forward Transconductance	g_{fs}	$V_{DS}=5V, I_D=20A$		35		S
Diode Forward Voltage	V_{SD}	$I_S=1.0A, V_{GS}=0V$			1.2	V
Dynamic						
Total Gate Charge	Q_g	$V_{DS}=80V, V_{GS}=10V$ $I_D=9A$		61	80	nC
Gate-Source Charge	Q_{gs}			12		
Gate-Drain Charge	Q_{gd}			16		
Input Capacitance	C_{iss}	$V_{DS}=25V, V_{GS}=0V$ $F=1MHz$		2580		pF
Output Capacitance	C_{oss}			270		
Reverse Transfer Capacitance	C_{rss}			88		
Turn-On Time	$t_{d(on)}$	$V_{DD}=50V, R_L=5\Omega$ $I_D=9.0A, V_{GEN}=10V$ $R_G=12\Omega$		20		nS
	t_r			19		
Turn-Off Time	$t_{d(off)}$			80		
	t_f			42		

TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS



TO-252-2L PACKAGE OUTLINE

