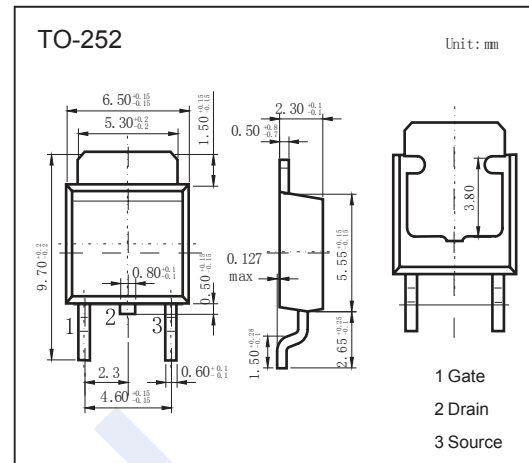
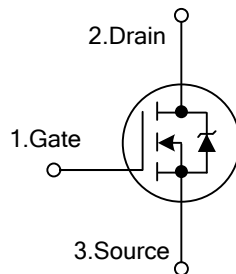


N-Channel MOSFET

NDT25N06

■ Features

- $V_{DS} (V) = 60V$
- $I_D = 25 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 65m\Omega$ ($V_{GS} = 10V$)
- High Current Capability
- Low Gate Charge



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	60	V
Drain-Gate Voltage ($R_{GS}=20k\Omega$)		V_{DGR}	60	
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current	$T_c=25^\circ C$	I_D	25	A
	$T_c=100^\circ C$		17	
Pulsed Drain Current		I_{DM}	100	
Power Dissipation		P_D	41	W
Single Pulse Avalanche Energy (Note.1)		E_{AS}	100	mJ
Thermal Resistance.Junction- to-Ambient		R_{thJA}	100	$^\circ C/W$
Thermal Resistance.Junction- to-Case		R_{thJC}	3	
Junction Temperature		T_J	150	$^\circ C$
Storage Temperature Range		T_{stg}	-65 to 150	

Note.1: starting $T_J=25^\circ C$, $I_D=25A$, $V_{DD}=25V$

N-Channel MOSFET

NDT25N06

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μA, V _{GS} =0V	60			V
Zero Gate Voltage Drain Current	I _{DSS}	V _D =Max Rating			1	μA
		V _D =Max Rating×0.8, T _C =125°C			10	
Gate-Body Leakage Current	I _{GSS}	V _D =0V, V _{GS} =±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _D =V _{GS} , I _D =250 μA	2		4	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =12.5A			65	mΩ
On State Drain Current	I _{D(on)}	V _D >I _{D(on)} ×R _{DS(on)MAX} , V _{GS} =10V	25			A
Forward Transconductance	g _{FS}	V _D >I _{D(on)} ×R _{DS(on)MAX} , I _D =12.5A	7	11		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _D =25V, f=1MHz			900	pF
Output Capacitance	C _{oss}				450	
Reverse Transfer Capacitance	C _{rss}				150	
Total Gate Charge	Q _g	V _{GS} =10V, V _D =40V, I _D =25A		26	40	nC
Gate Source Charge	Q _{gs}			8		
Gate Drain Charge	Q _{gd}			9		
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _D =30V, I _D =3A, R _G =50Ω			45	ns
Turn-On Rise Time	t _r				130	
Turn-Off DelayTime	t _{d(off)}	V _{GS} =10V, V _D =40V, I _D =25A, R _G =50Ω			120	
Turn-Off Fall Time	t _f				120	
Source-Drain Current	I _S				25	A
Source-Drain Current (Pulsed)	I _{SD}				100	
Diode Forward Voltage	V _{SD}	I _S =25A, V _{GS} =0V (Note.1)			1.5	V

Note.1: Pulsed: Pulse duration = 300μs, duty cycle 1.5%.

N-Channel MOSFET

NDT25N06

■ Typical Characteristics

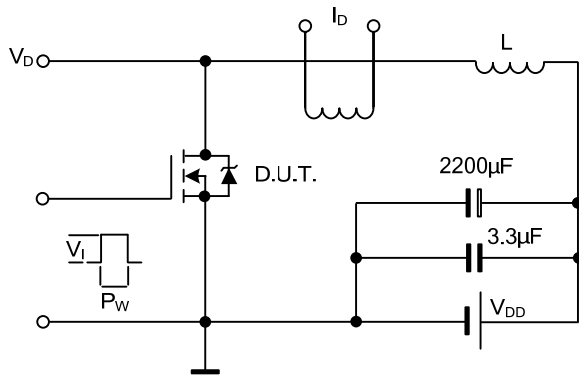


Fig. 1 Unclamped Inductive Load Test Circuits

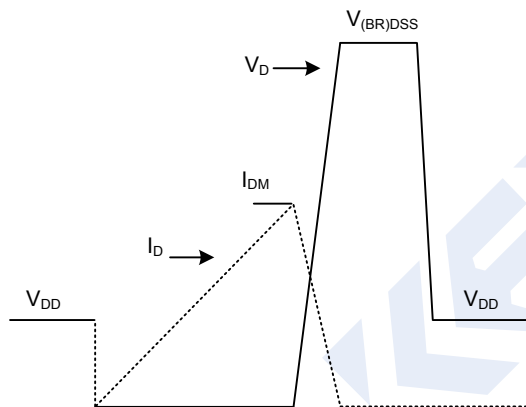


Fig. 2 Unclamped Inductive Waveforms

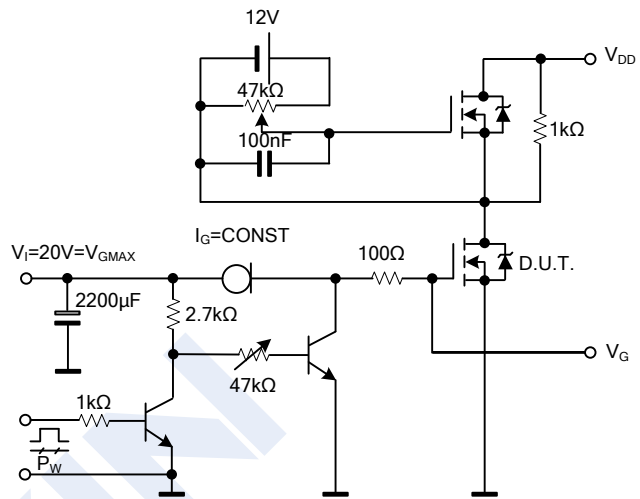


Fig. 4 Gate Charge Test Circuit

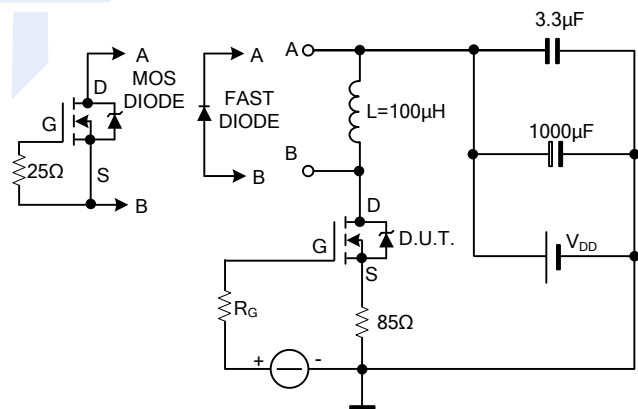


Fig. 5 Test Circuit For Inductive Load Switching And Diode Reverse Recovery Time

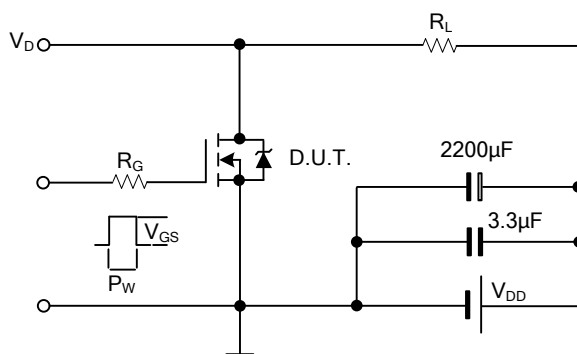


Fig. 3. Switching Times Test Circuits For Resistive Load