

**Thermal resistance**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	7.3	v C/W
Thermal resistance, junction - ambient	R_{thJA}	-	-	62	v C/W
Soldering temperature, wavesoldering for 10s	T_{sold}	-	-	265	v C

N Channel Absolute Maximum Ratings $T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	20	V

Pulsed Drain Current	I_{DM}	45	A
Total Power Dissipation	$P_D@T_C=25$	17	W
Total Power Dissipation	$P_D@T_A=25$	2.0	W
Operating Junction Temperature	T_J	-55 to 150	
Storage Temperature	T_{STG}	-55 to 150	
Single Pulse Avalanche Energy	E_{AS}	6	mJ

P Channel Absolute Maximum Ratings $T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	$I_D@T_C = 25$	-14	A
	$I_D@T_C = 75$	-10.6	A
	$I_D@T_C = 100$	-8.8	A
Pulsed Drain Current	I_{DM}	-42	A
Total Power Dissipation	$P_D@T_C=25$	17	W
Total Power Dissipation	$P_D@T_A=25$	2.0	W
Operating Junction Temperature	T_J	-55 to 150	

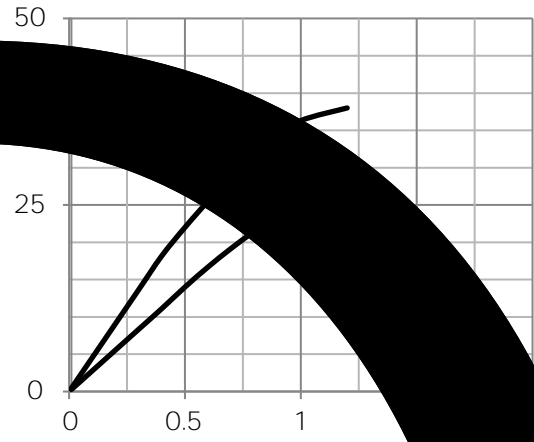
Gate Resistance	Rg	f = 1MHz		1.5		
Input capacitance	Ciss	f = 1MHz V _{DS} =25V	-	280	-	pF
Output capacitance	Coss		-	46	-	
Reverse transfer capacitance	Crss		-	25	-	
Total gate charge	Qg	V _{DD} = 25V I _D = 5A V _{GS} = 10V	-	5.3	-	nC
Gate - Source charge	Qgs		-	1.4	-	
Gate - Drain charge	Qgd		-	0.8	-	

P Channel Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} = 0V, I _D = -250uA	-30			V
Gate Threshold Voltage	V _{GS(TH)}	V _{GS} = V _{DS} , I _D = -250uA	-1.2		-2.5	V
Drain-Source Leakage Current	I _{DSS}	V _{DS} = -30V, V _{GS} = 0V			-1.0	uA
Gate- Source Leakage Current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			...100	nA
Static Drain-source On Resistance		V _{GS} = -10V, I _D = -6A		30	42	m
		V _{GS} = -4.5V, I _D = -4A		44	60	m
Forward Transconductance	g _{FS}	V _{DS} = -10V, I _D = -5A		1.5		s

Dynamic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Gate Resistance	Rg	f = 1MHz		10		
Input capacitance	Ciss	f = 1MHz V _{DS} =25V	-	850	-	pF
Output capacitance	Coss		-	125	-	
Reverse transfer capacitance	Crss		-	115	-	
Total gate charge	Qg	V _{DD} = 25V I _D = 5A V _{GS} = 10V	-	12	-	nC
Gate - Source charge	Qgs		-	5	-	
Gate - Drain charge	Qgd		-	6	-	



Test Circuit

Fig.1 Switching Time Measurement Circuit

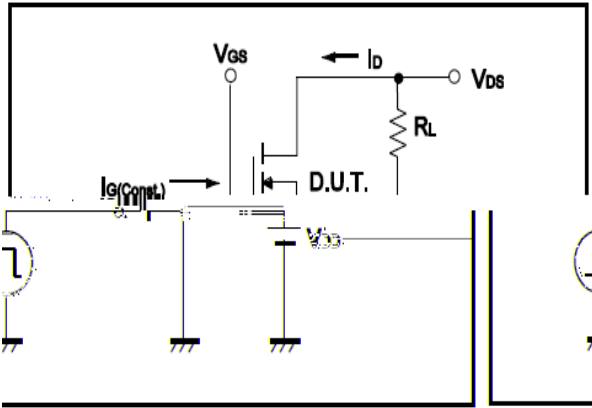


Fig.2 Gate Charge Waveform

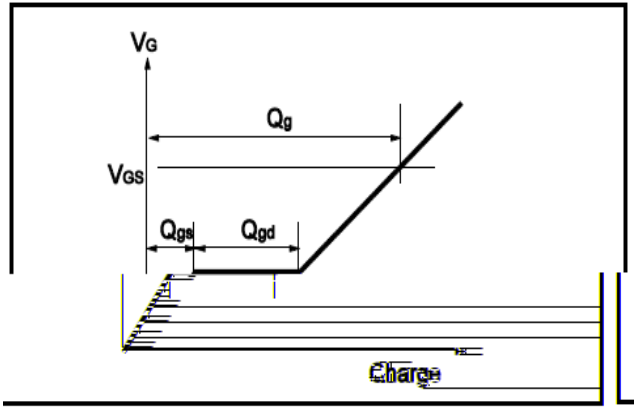


Fig.3 Switching Time Measurement Circuit

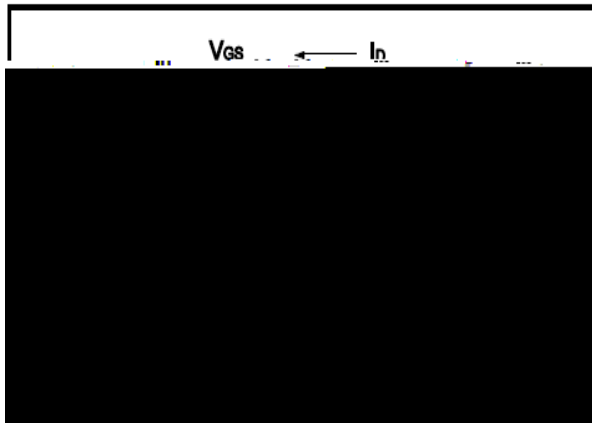


Fig.4 Gate Charge Waveform

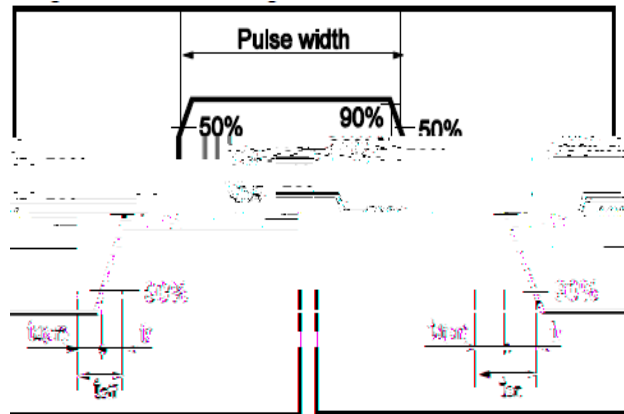


Fig.5 Avalanche Measurement Circuit

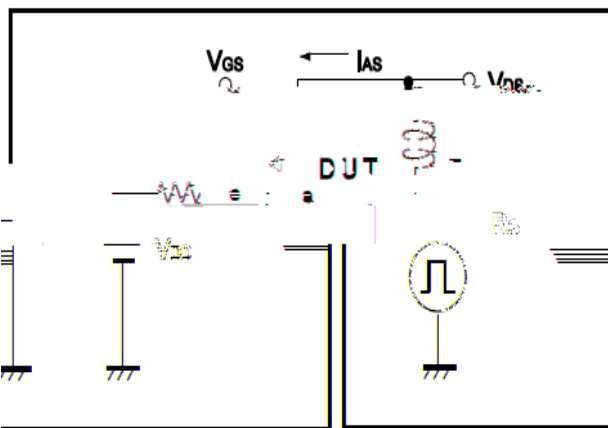


Fig.6 Avalanche Waveform

