

**Ordering Information:****Absolute Maximum Ratings**  $T_C = 25$ 

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	80	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D @ T_C = 25$	11	A
	$I_D @ T_C = 75$	8.3	A
	$I_D @ T_C = 100$	6.9	A
Pulsed Drain Current	$I_{DM}$	33	A
Total Power Dissipation	$P_D @ T_C = 25$	3.1	W
Total Power Dissipation	$P_D @ T_A = 25$	0.69	W
Operating Junction Temperature	$T_J$	-55 to 150	
Storage Temperature	$T_{STG}$	-55 to 150	
Single Pulse Avalanche Energy @ $L = 0.1mH$	$E_{AS}$	180	mJ

**Thermal resistance**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R <sub>thJC</sub>	-	-	40	° C/W
Thermal resistance, junction - ambient	R <sub>thJA</sub>	-	-	180	° C/W
Soldering temperature, wavesoldering for 10s	T <sub>sold</sub>	-	-	265	° C

**Electronic Characteristics**

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =250uA	80			V
Gate Threshold Voltage	V <sub>GS(TH)</sub>	V <sub>GS</sub> =V <sub>DS</sub> , I <sub>D</sub> =250uA	1.3		2.5	V
Drain-Source Leakage Current	I <sub>DSS</sub>	V <sub>DS</sub> =80V, V <sub>GS</sub> =0V			1.0	uA
Gate- Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0V			100	nA
Static Drain-source On Resistance	R <sub>DS(ON)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =20A				
	R <sub>DS(ON)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =16A				
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =25V, I <sub>D</sub> =15A				

**Electronic Characteristics**

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	C <sub>iss</sub>	f = 1MHz	-	4400	-	pF
Output capacitance	C <sub>oss</sub>		-	290	-	
Reverse transfer capacitance	C <sub>rss</sub>		-	140	-	

**Gate Charge characteristics(T<sub>a</sub>= 25 )**

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Total gate charge	Q <sub>g</sub>	V <sub>DD</sub> =30V I <sub>D</sub> = 6A V <sub>GS</sub> = 10V	-	58	-	nC
Gate - Source charge	Q <sub>gs</sub>		-	13	-	
Gate - Drain charge	Q <sub>gd</sub>		-	15	-	

Note:

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Device mounted on FR-4 substrate PC board, 2oz copper,



Fig.7 On-Resistance VS Gate Source Voltage

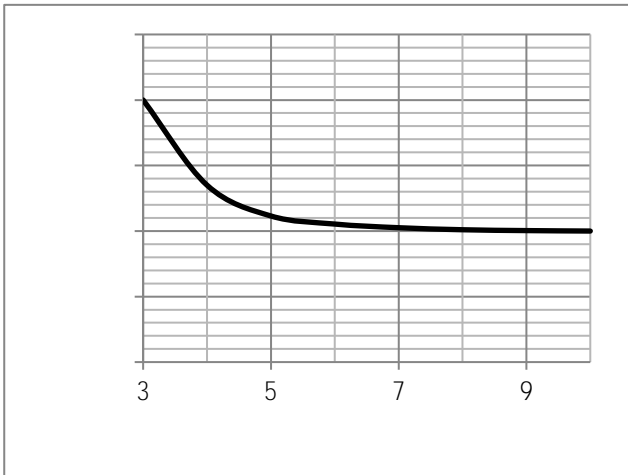


Fig.8 On-Resistance V.S Junction Temperature

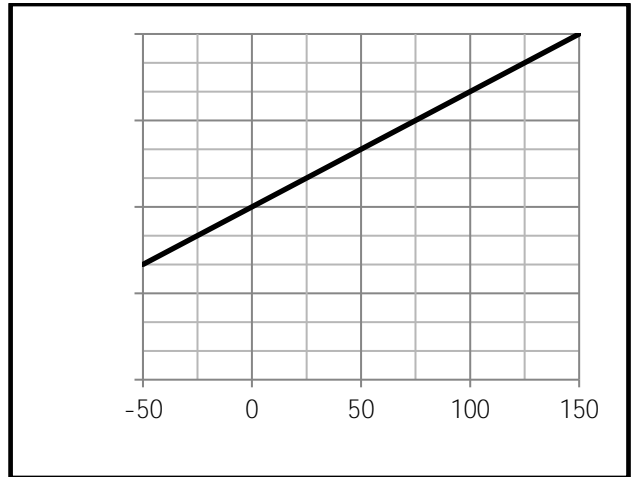


Fig.9 Switching Time Measurement Circuit

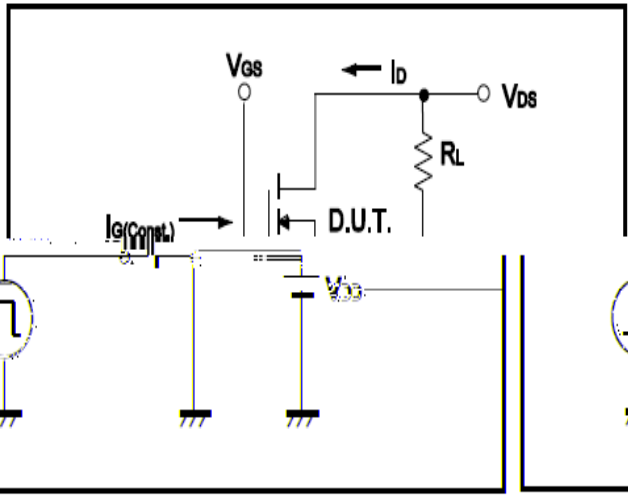


Fig.10 Gate Charge Waveform

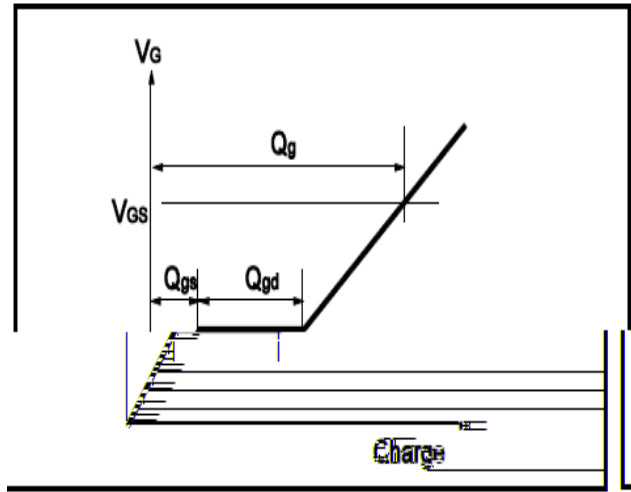


Fig.11 Switching Time Measurement Circuit

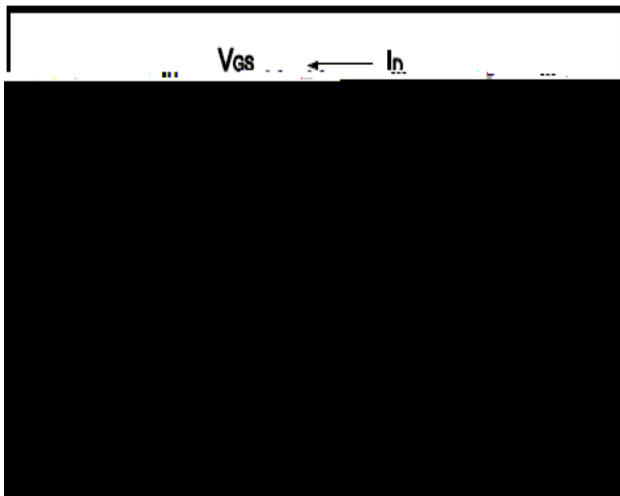
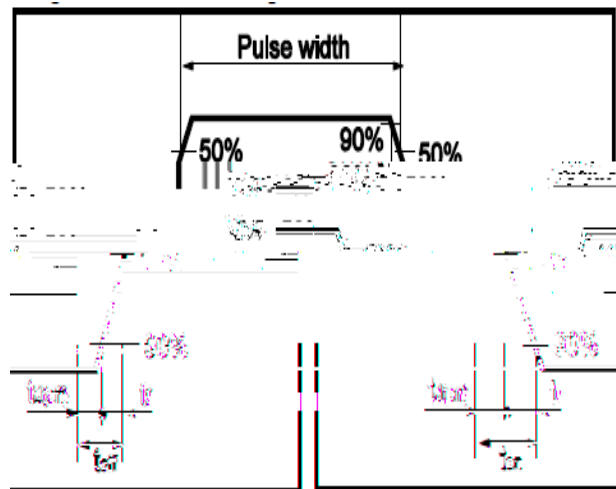


Fig.12 Gate Charge Waveform





**Dimensions(SOP8)**

Unit: mm

SYMBOL	min	TYP	max	SYMBOL	min		max
A	4.80		5.25	C	1.30		1.75
A1	0.37		0.49	C1	0.55		0.75
A2		1.27		C2	0.55		0.65