



**T<sub>C</sub> =25**

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V <sub>DS</sub>	20	V
Gate-Source Voltage	V <sub>GS</sub>	±8	V
Continuous Drain Current	I <sub>D@T<sub>C</sub>=25°C</sub>	3	A
	I <sub>D@T<sub>C</sub>=75°C</sub>	2.3	A
	I <sub>D@T<sub>C</sub>=100°C</sub>	1.9	A
Pulsed Drain Current ①	I <sub>DM</sub>	10	A
Total Power Dissipation	P <sub>D@T<sub>C</sub>=25°C</sub>	10	W
Total Power Dissipation	P <sub>D@T<sub>A</sub>=25°C</sub>	0.9	W
Operating Junction Temperature	T <sub>J</sub>	-55 to 150	°C
Storage Temperature	T <sub>STG</sub>	-55 to 150	

**Thermal resistance**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R <sub>thJC</sub>	-	-	12.5	C/W
Thermal resistance, junction - ambient	R <sub>thJA</sub>	-	-	150	C/W
Soldering temperature, wavesoldering for 10s	T <sub>sold</sub>	-	-	265	C

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	20			V
Gate Threshold Voltage	V <sub>GS(TH)</sub>	V <sub>GS</sub> =V <sub>DS</sub> , I <sub>D</sub> =250uA	0.5		1.2	V
Drain-Source Leakage Current	I <sub>DSS</sub>	V <sub>DS</sub> =20V, V <sub>GS</sub> =0V			1.0	uA
Gate- Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±8V, V <sub>DS</sub> =0V			±100	nA
Static Drain-source On Resistance	R <sub>DS(ON)</sub>	V <sub>GS</sub> =4.5V, I <sub>D</sub> =3.6A		46	60	mΩ
		V <sub>GS</sub> =2.5V, I <sub>D</sub> =3.1A		65	85	mΩ
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =5A		8		s

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	C <sub>iss</sub>	f = 1MHz	-	260	-	pF
Output capacitance	C <sub>oss</sub>		-	88	-	
Reverse transfer capacitance	C <sub>rss</sub>		-	64	-	

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

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Total gate charge	Q <sub>g</sub>	V <sub>DD</sub> =10V I <sub>D</sub> = 300.29 197				

Fig.1 Power Dissipation Derating Curve

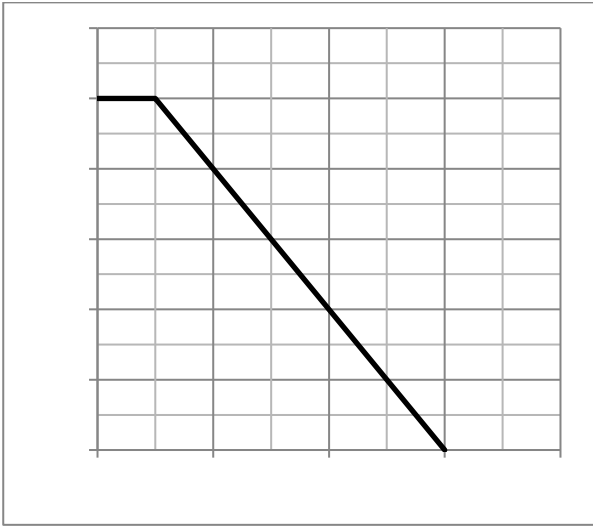


Fig.2 Typical output Characteristics

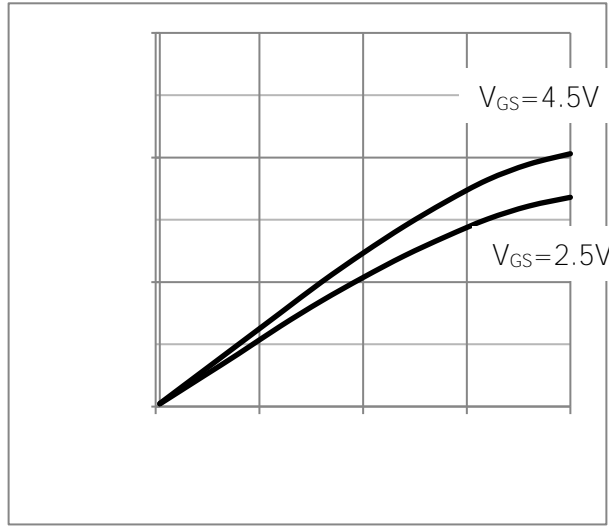


Fig.3 Threshold Voltage V.S Junction Temperature

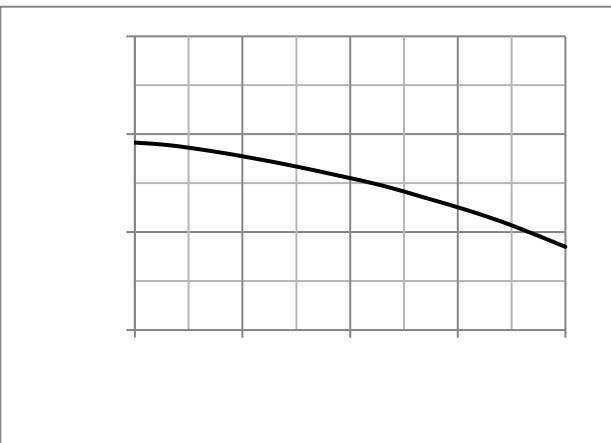


Fig.4 Resistance V.S Drain Current

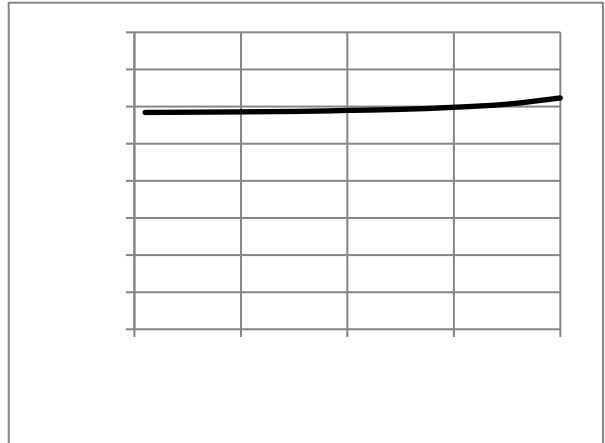


Fig.5 On-Resistance VS Gate Source Voltage

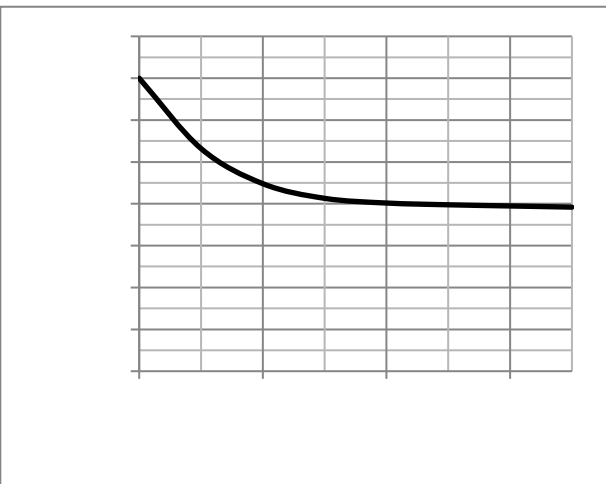


Fig.6 On-Resistance V.S Junction Temperature

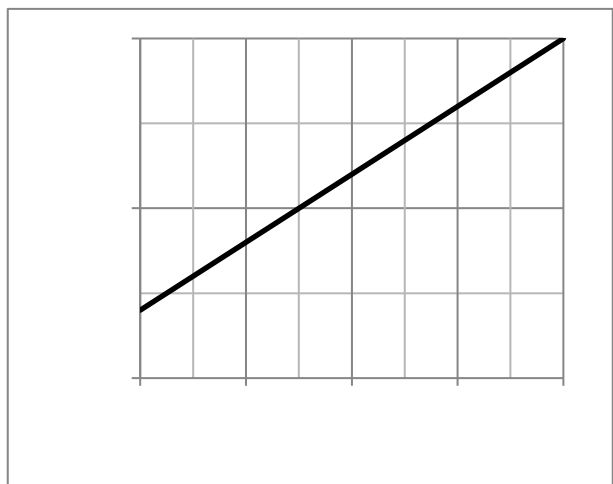




Fig.7 Switching Time Measurement Circuit

Fig.8 Gate Charge Waveform

Fig.9 Switching Time Measurement Circuit

Fig.10 Gate Charge Waveform

Fig.11 Avalanche Measurement Circuit

Fig.12 Avalanche Waveform

