The ZM027N03P combines advanced trench MOSFET technology with a low resistance package

T_C =25

Parameter	**Symbol**	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	$I_{D@}$TC=25	140	A
	$I_{D@}$TC=75	106	A
	I_{D} @TC=100	88	A
Pulsed Drain Current	I_{DM}	280	A
Total Power Dissipation	P_D@TC=25	120	W
Total Power Dissipation	P_D@TA=25	5	W
Operating Junction Temperature	T_J	-55 to 150	
Storage Temperature	T_{STG}	-55 to 150	
Single Pulse Avalanche Energy	E_{AS}	350	mJ
Avalanche Current	I_{AS} I_{AR}	60	A

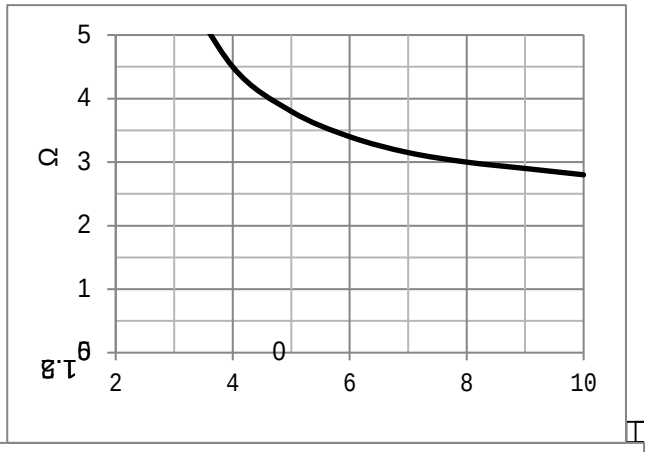
Thermal resistance

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	1.1	° C/W
Thermal resistance, junction - ambient	R_{thJA}	-	-	25	° C/W
Soldering temperature, wave soldering for 10s	T_{sold}	-	-	265	° C

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=24A				
		V_{GS}=4.5V, I_D=12A				
Forward Transconductance	g_{FS}	V_{DS} =25V, I_D=10A				
Source-drain voltage	V_{SD}	Is=24A				

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	Ciss	f = 1MHz, V_{DS}=25V	-	2800	-	pF
Output capacitance	Coss		-	420	-	
Reverse transfer capacitance	CMCID					

Turn-Off Delay time			50	ns



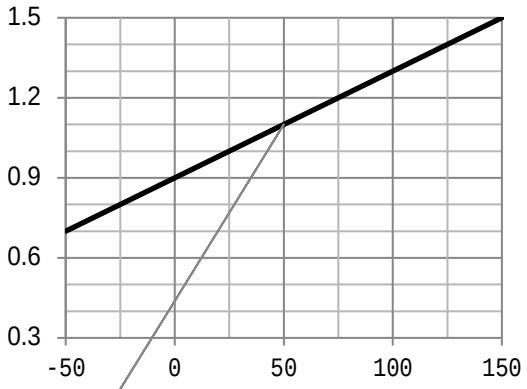
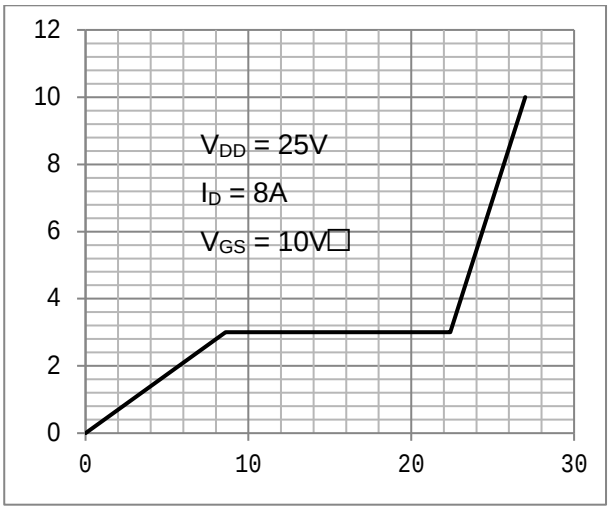


Fig.7 SOA Maximum Safe Operating Area

Fig.8 ID-Junction Temperature

□ □ □ Fig.12 □ □

□ □ □ □



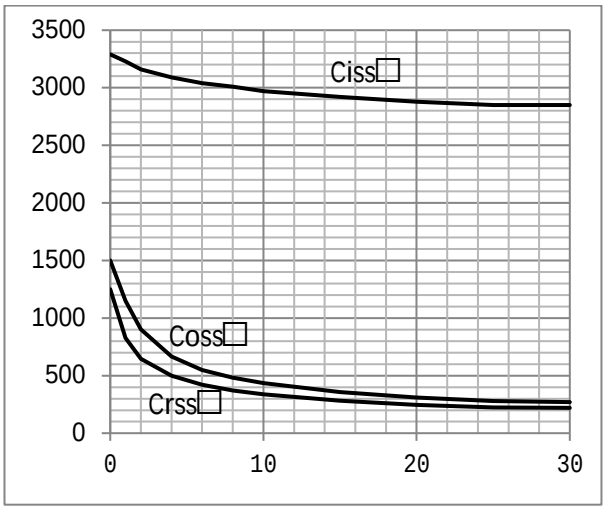
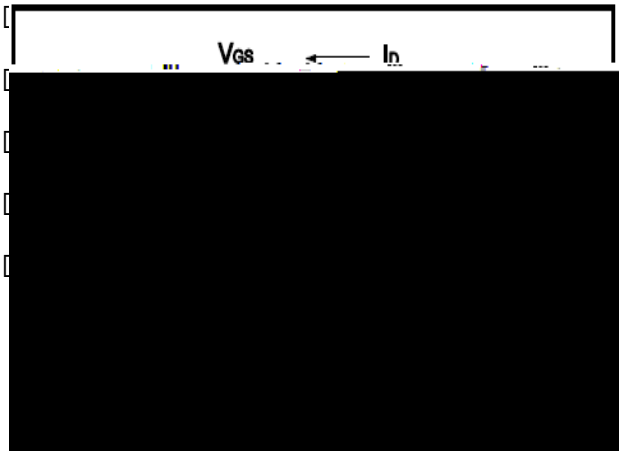


Fig.13 Switching Time Measurement Circuit

Fig.14 Gate Charge Waveform □



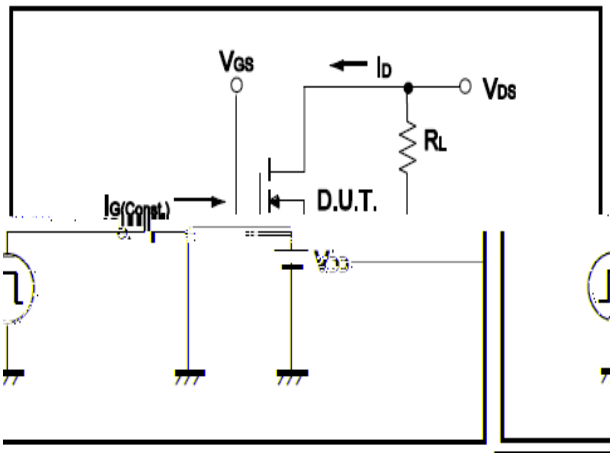
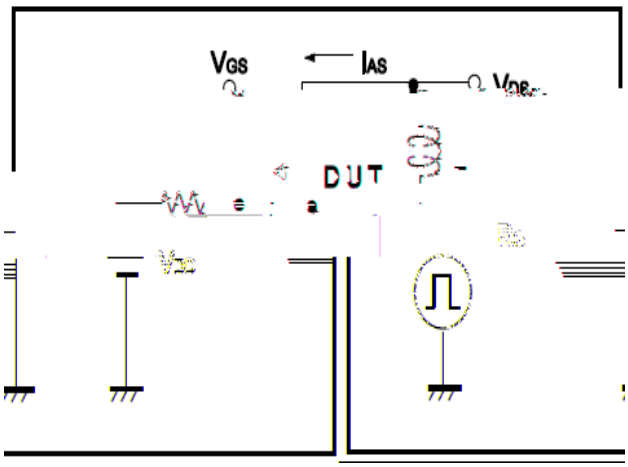


Fig.15 Avalanche Measurement Circuit

Fig.16 Avalanche Waveform□□



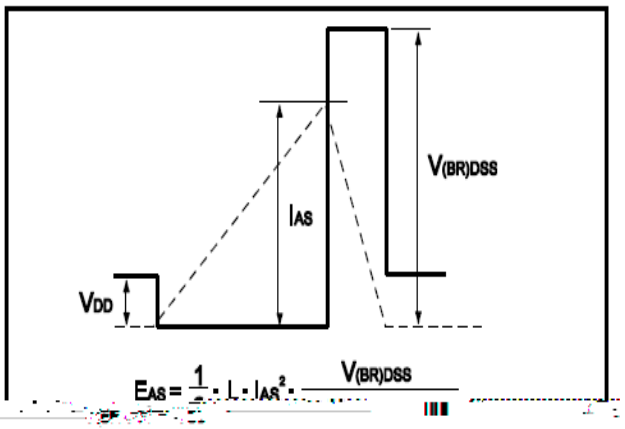


Fig.17 Gate Charge Waveform