

The ZM094N03M combines advanced trench MOSFET technology with a low resistance package to provide

$T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	$I_{D@TC=25}$	35	A
	$I_{D@TC=75}$	26	A
	$I_{D@TC=100}$	22	A
	$I_{D@TA=25}$	10.3	A
	$I_{D@TA=70}$	8.2	A
Pulsed Drain Current	I_{DM}	70	A
Total Power Dissipation	$P_D@TC=25$	40	W
Total Power Dissipation	$P_D@TA=25$	2.0	W
Operating Junction Temperature	T_J	-55 to 150	



Storage Temperature	T_{STG}	-55 to 150	
Single Pulse Avalanche Energy	E_{AS}	30	mJ

Thermal resistance

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	3.1	C/W
Thermal resistance, junction - ambient	R_{thJA}	-	-	60	C/W
Soldering temperature, wave soldering for 10s	T_{sold}	-	-	265	C

Characteristics

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250\mu A$	30			V
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{GS}=V_{DS}, I_D=250\mu A$	1.2		2.5	V
Drain-Source Leakage Current	I_{DSS}	$V_{DS}=30V, V_{GS}=0V$			1.0	μA
Gate- Source Leakage Current	I_{GSS}	$V_{GS}=\pm 12V, V_{DS}=0V$			100	nA
Static Drain-source On Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=8A$ $V_{GS}=4.5V, I_D=6A$				

Fig.5 On-Resistance VS Gate Source Voltage

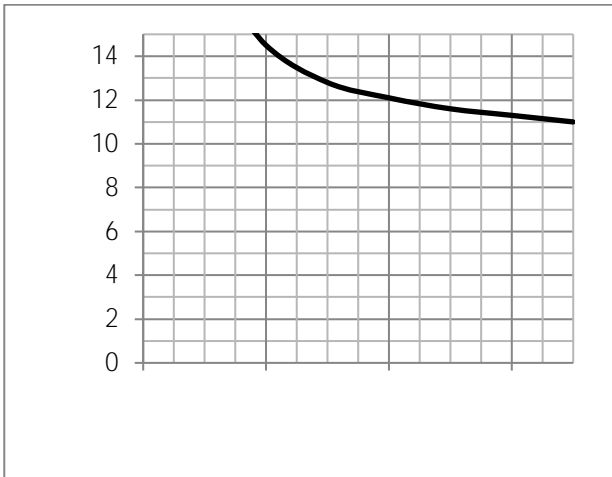


Fig.6 On-Resistance V.S Junction Temperature

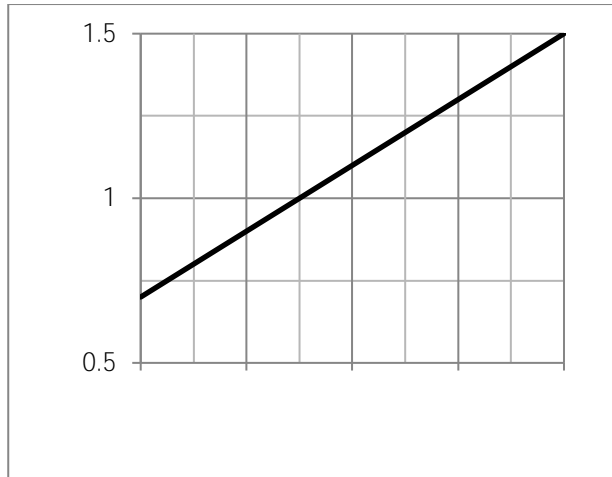


Fig.7 Switching Time Measurement Circuit

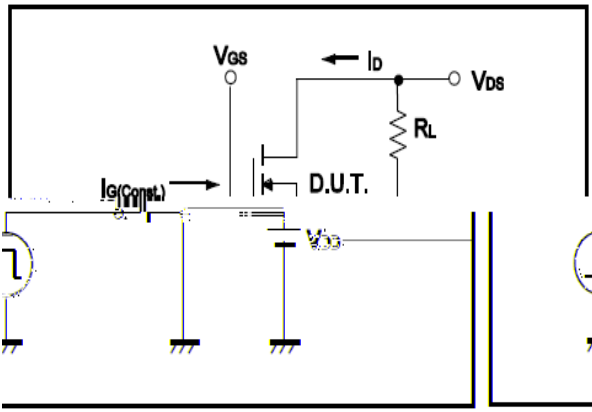


Fig.8 Gate Charge Waveform

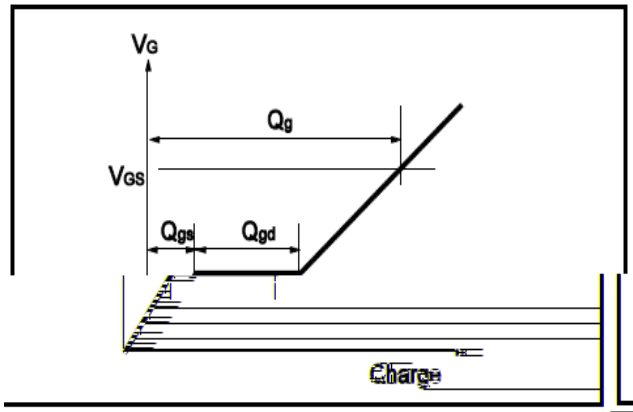


Fig.9 Switching Time Measurement Circuit

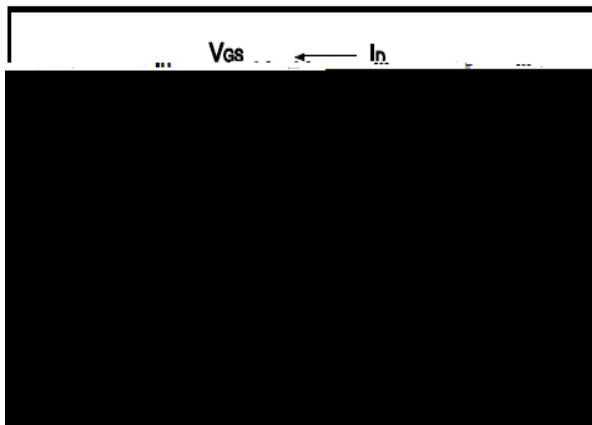


Fig.10 Gate Charge Waveform

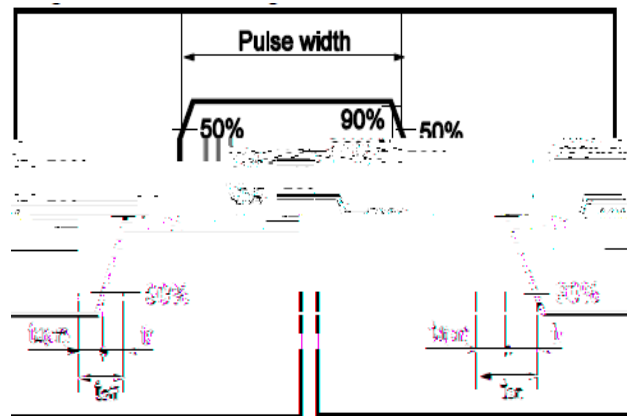


Fig.11 Avalanche Measurement Circuit

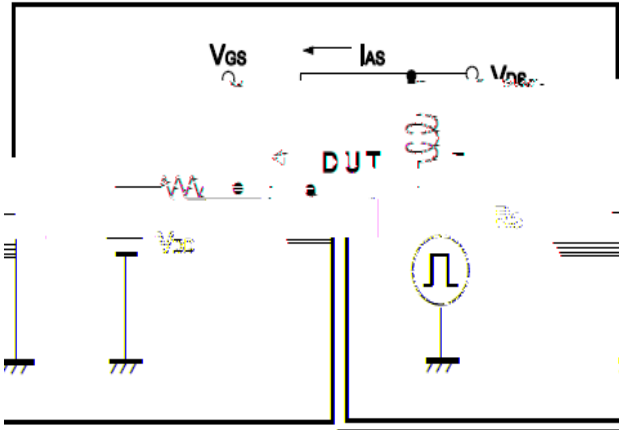
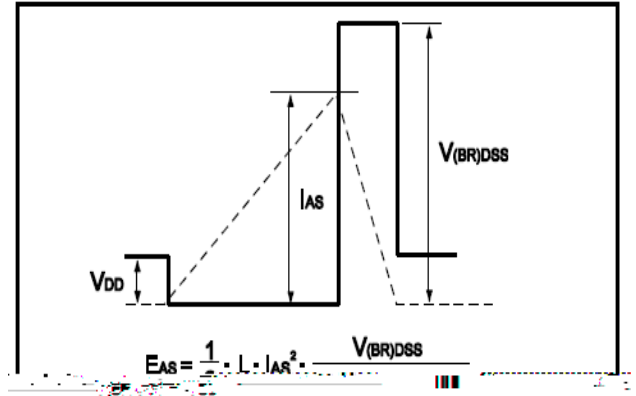


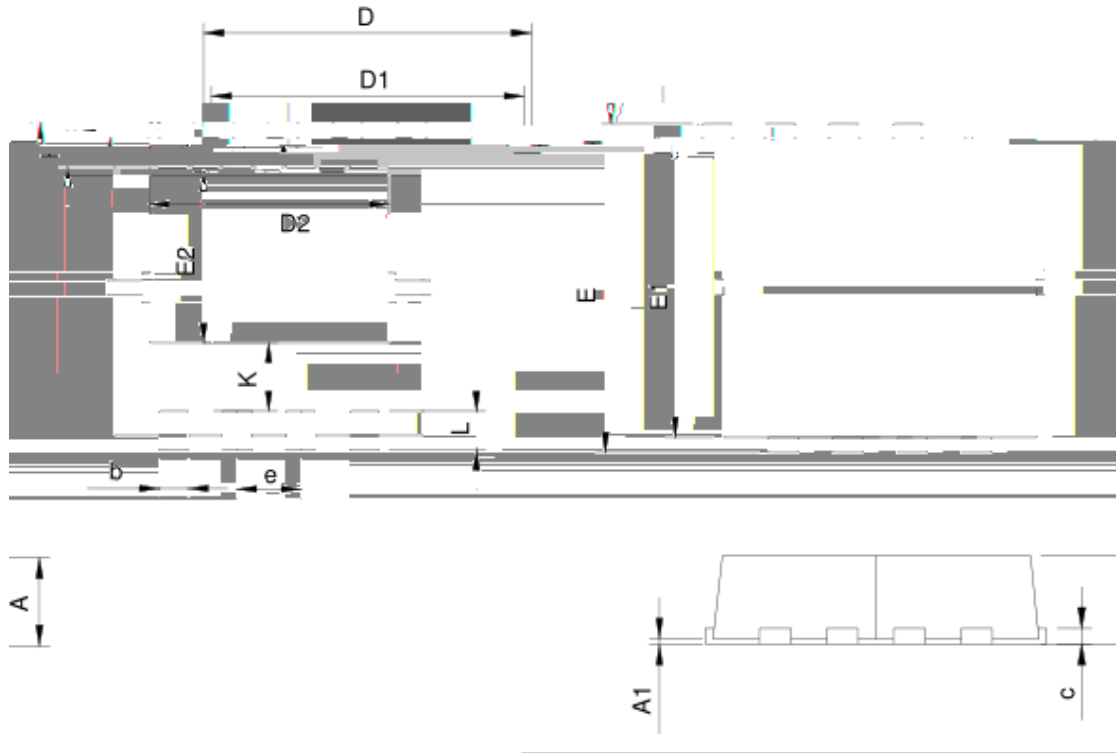
Fig.12 Avalanche Waveform





sions(DFN3x3)

Unit mm



DFN3.3x3.3-8		RECOMMENDED LAND PATTERN			
		MILLIMETERS		INCHES	
		MIN.	MAX.	MIN.	MAX.
A	0.70	1.00	0.028	0.039	
A1	0.00	0.05	0.000	0.002	
b	0.25	0.35	0.010		
c	0.14	0.20	0.006		
D	3.10	3.50	0.122		
D1	3.05	3.25	0.120		
D2	2.35	2.55	0.093	0.100	
E	3.10	3.30	0.122	0.138	
E1	2.90	3.10	0.114	0.122	
E2	2.35	2.55	0.093	0.100	
e	0.65 BSC	0.52	0.013	0.020	
H	0.32	0.52	0.013	0.020	
K	0.59	0.79	0.023	0.031	
	0.25	0.35	0.010	0.022	