● General Description

It combines advanced trench MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$.

● Features

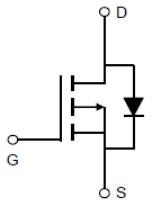
Trench technology

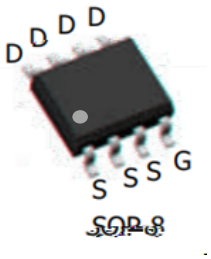
$_{DS(ON)}$ to minimize conductive loss

●Application

nd Synchronous Rectifier

● Product Summary





●Ordering Information:

Part NO.	ZM220P02S
Marking	ZM220P02
Packing Information	REEL TAPE
Basic ordering unit (pcs)	4000

●Absolute Maximum Ratings T_C =25

Parameter	**Symbol**	Rating	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current	I_D@T_C=25	-6.2	A
	I_D@T_C=75	-4.7	A
	I_D@T_C=100	-3.9	A
Pulsed Drain Current	I_{DM}	-18.6	A
Total Power Dissipation	P_D@T_C=25	3.6	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	E_{AS}	25	mJ

●Thermal resistance

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	34	° C/W
Thermal resistance, junction - ambient	R_{thJA}	-	-	180	° C/W
Soldering temperature, wavesoldering for 10s	T_{sold}	-	-	265	° C

●Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} =0V, I_D =-250uA	-20			V
Gate Threshold Voltage	$V_{GS(TH)}$	V_{GS} =V_{DS}, I_D =-250uA	-			

Fig.1 Gate-Charge Characteristics

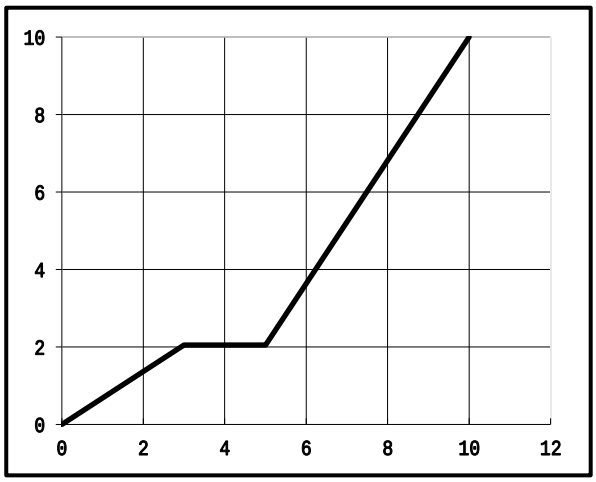


Fig.2 Capacitance Characteristics

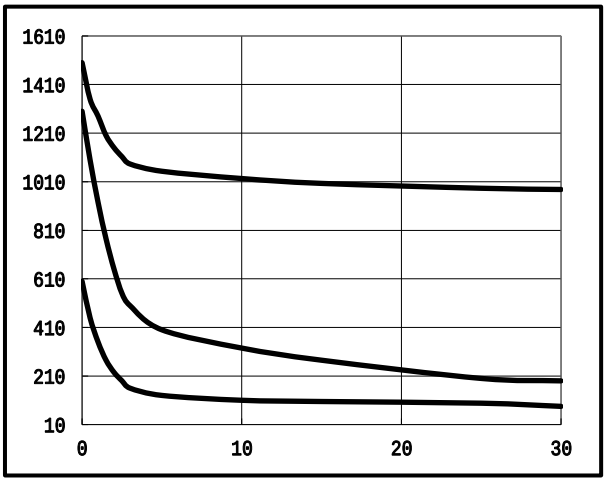


Fig.3 Power Dissipation Derating Curve

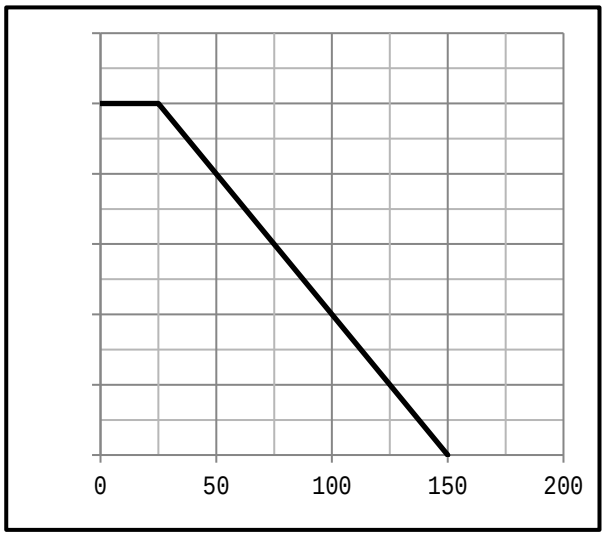


Fig.4 Typical output Characteristics

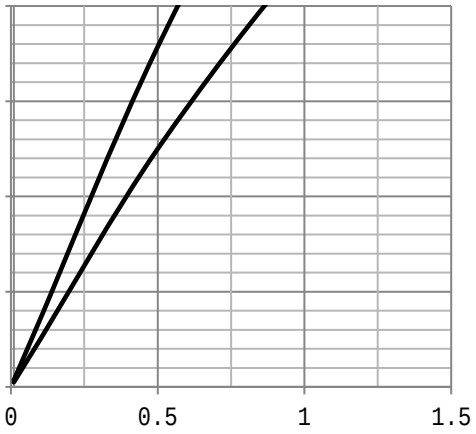
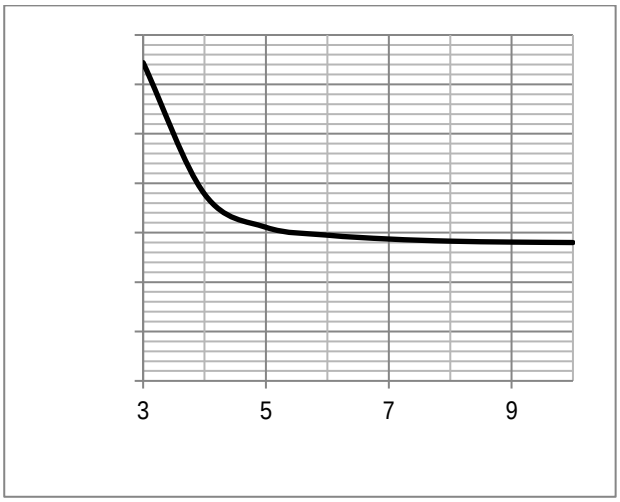


Fig.5 Threshold Voltage V.S Junction Temperature

Fig.6 Resistance V.S Drain Current



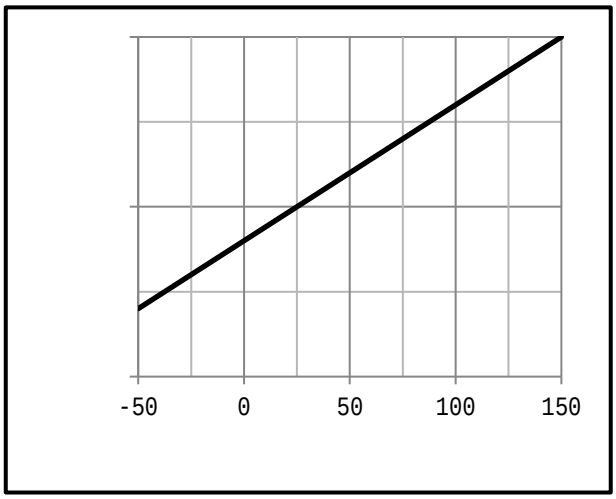
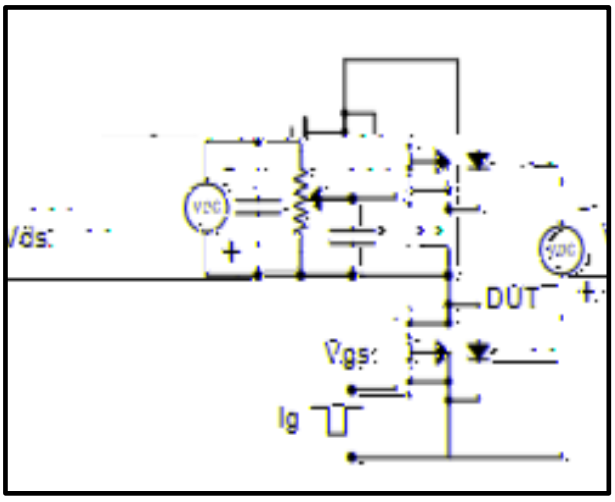


Fig.9 Switching Time Measurement Circuit

Fig.10 Gate Charge Waveform



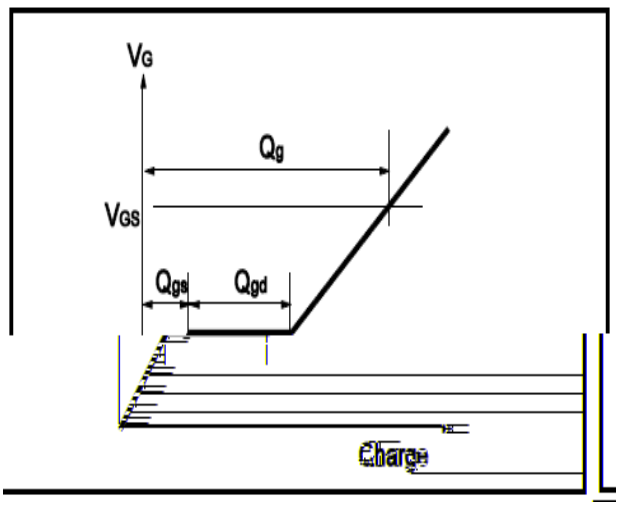
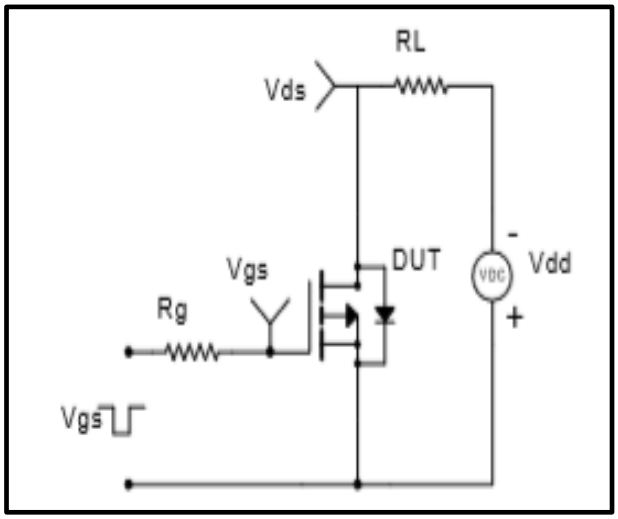
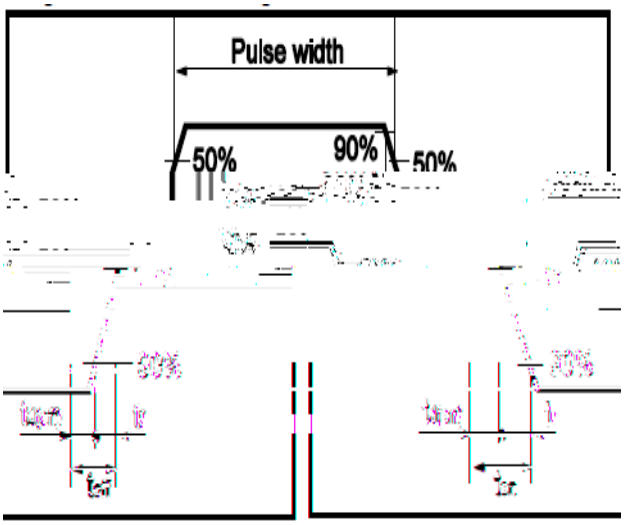


Fig.11 Switching Time Measurement Circuit

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
A3		0.41		C3	0.05		0.20
B	5.80		6.20	C4	0.10	0.20	0.23
B1	3.80		4.10	D		1.05	
B2		5.00		D1	0.40		0.62