

General Description

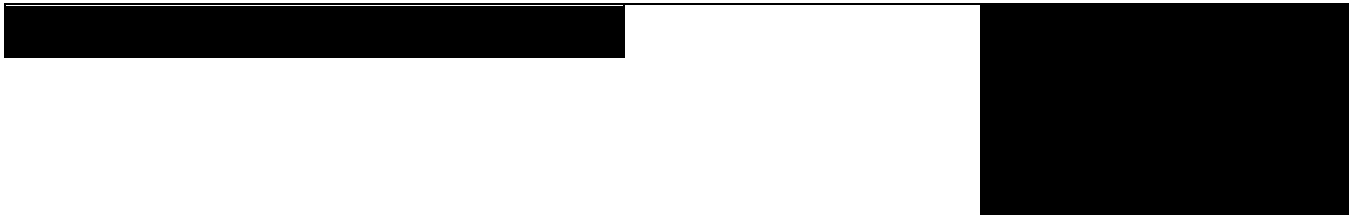
The ZMS040N10P combines advanced SGT MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$.

Features

Trench technology
 $R_{DS(ON)}$ to minimize conductive loss

Application

Synchronous Rectification for AC-DC/DC-DC converter
 Oring switches
 Power Tools

Product Summary
Ordering Information:

Absolute Maximum Ratings $T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	$I_D @ T_C = 25$	160	A
	$I_D @ T_C = 75$	121	A
	$I_D @ T_C = 100$	100	A
Pulsed Drain Current	I_{DM}	480	A
Total Power Dissipation	$P_D @ T_C = 25$	85	W
Total Power Dissipation	$P_D @ T_A = 25$	3.4	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}	200	mJ

Body Diode Reverse Recovery Charge	Q _{rr}	I _F =20A, di/dt=100A/μs	170	nC
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Note:

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Fig.1 Gate-Charge Characteristics

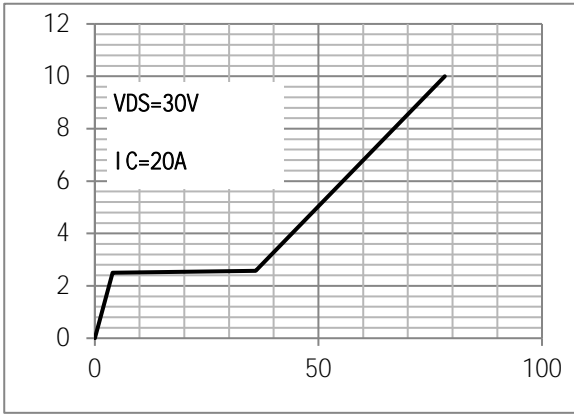


Fig.2 Capacitance Characteristics

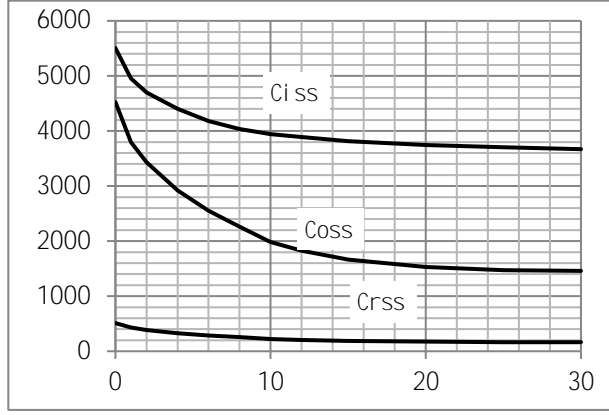


Fig.3 Power Dissipation

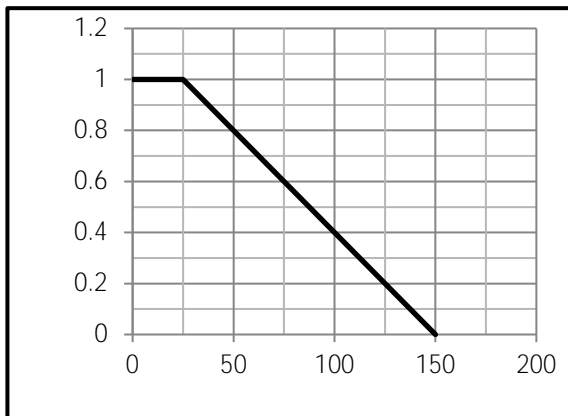


Fig.4 Typical output Characteristics

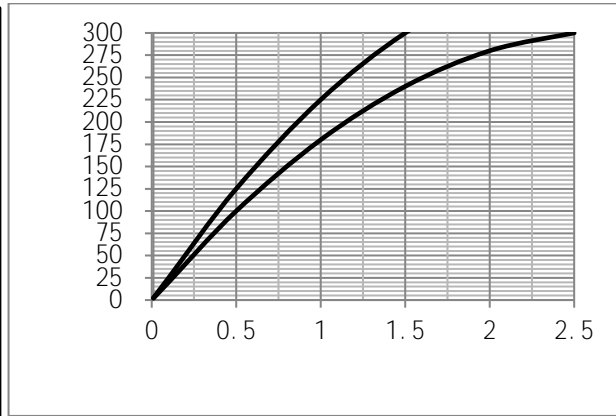


Fig.5 Threshold Voltage V.S Junction Temperature

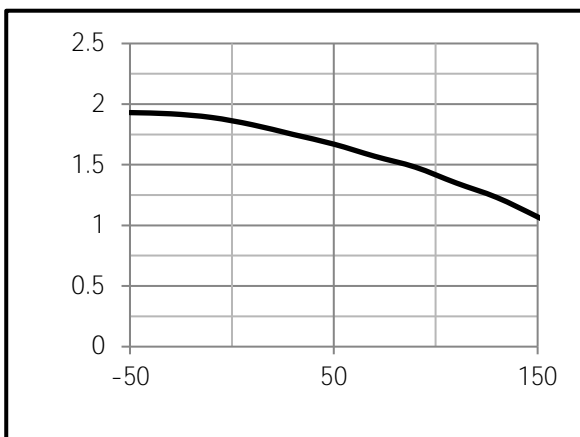
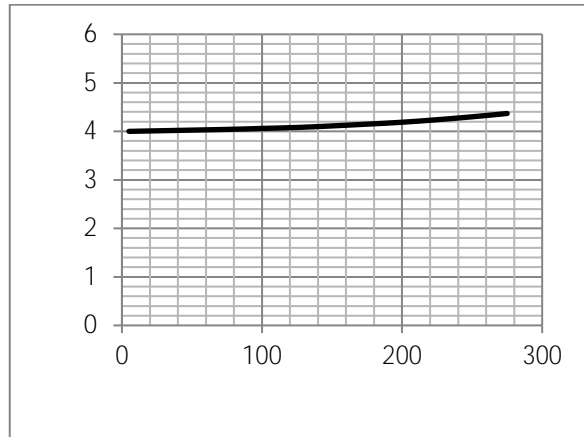


Fig.6 Resistance V.S Drain Current



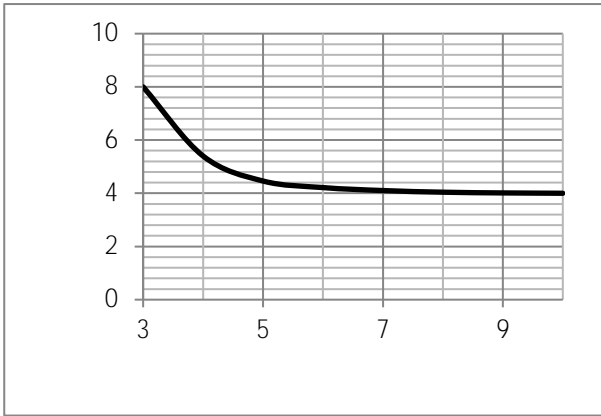


Fig.9 SOA Maximum Safe Operating Area

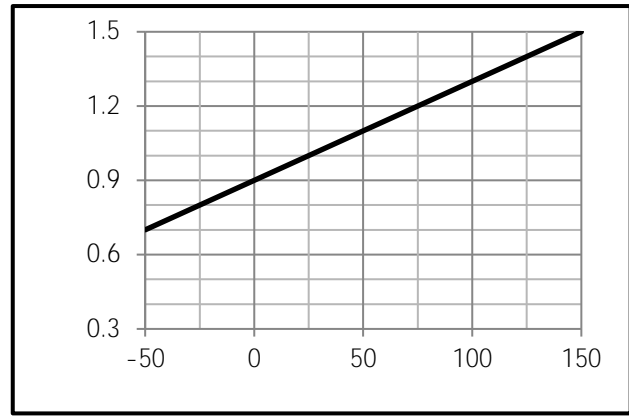


Fig.10 I_D -Junction Temperature

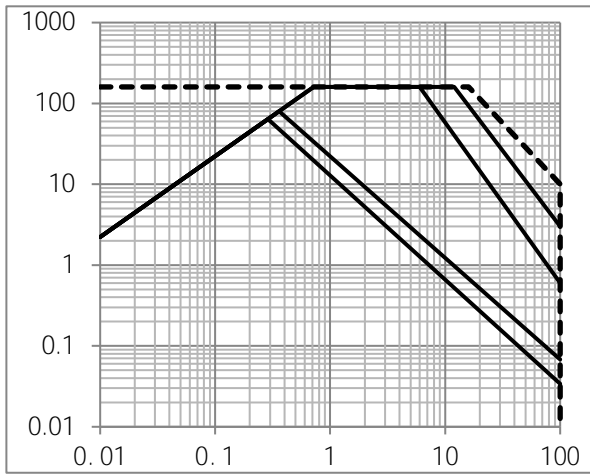


Fig.11 Switching Time Measurement Circuit

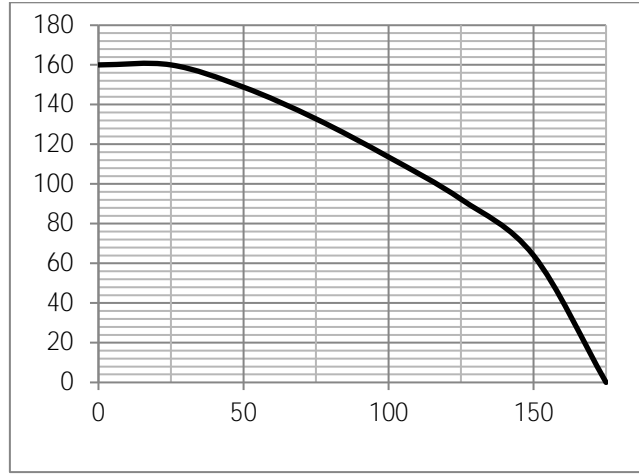


Fig.12 Gate Charge Waveform

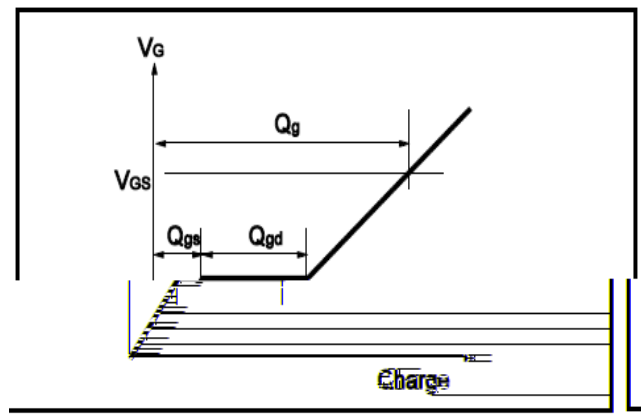
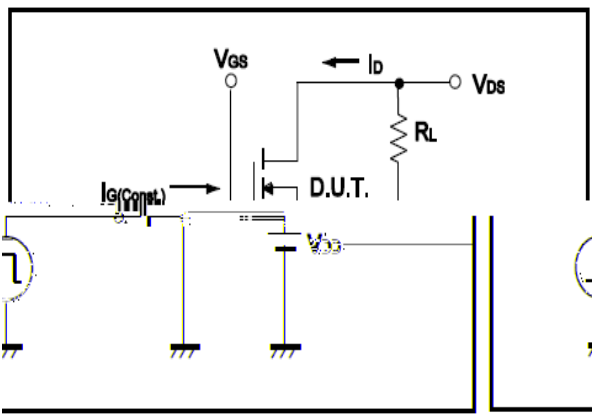




Fig.13 Switching Time Measurement Circuit

Fig.



Dimensions TO-220

Unit mm

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