



**B**

The ZMS050N06SA combines advanced trench MOSFET technology with a low resistance package to provide extremely low  $R_{DS(ON)}$ .



device constructure

$R_{DS(ON)}$  to minimize conduction loss

fast switching



Synchronous Rectification for AC-DC/DC-DC converter

Oring switches

Power Tools

**D**



$T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	66	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_{D@TC=25}$	15	A
	$I_{D@TC=75}$	11	A
	$I_{D@TC=100}$	9	A
Pulsed Drain Current	$I_{DM}$	50	A
Total Power Dissipation	$P_D@TC=25$	4.0	W
Total Power Dissipation	$P_D@TA=25$	0.83	W
Operating Junction Temperature	$T_J$	-55 to 150	
Storage Temperature	$T_{STG}$	-55 to 150	
Single Pulse Avalanche Energy@L=0.1mH	$E_{AS}$	70	mJ



**Thermal resistance**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - ambient	$R_{thJA}$	-	-	150	° C/W
Soldering temperature, wavesoldering for 10s	$T_{sold}$	-	-	265	° C

**Electrical Characteristics**

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS} = 0V, I_D = 250\mu 8.54$				



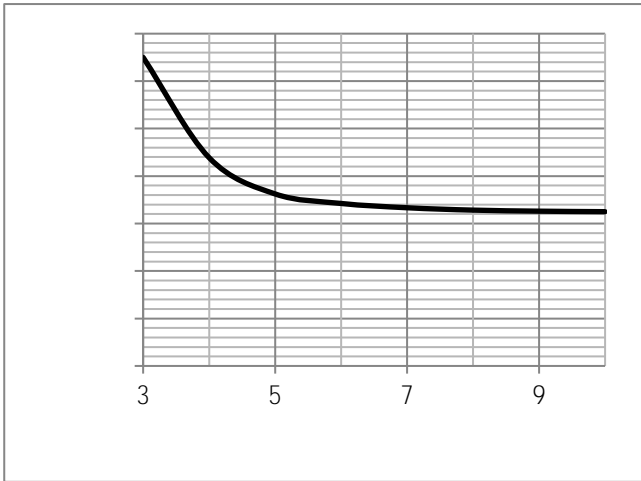


Fig.9 SOA Maximum Safe Operating Area

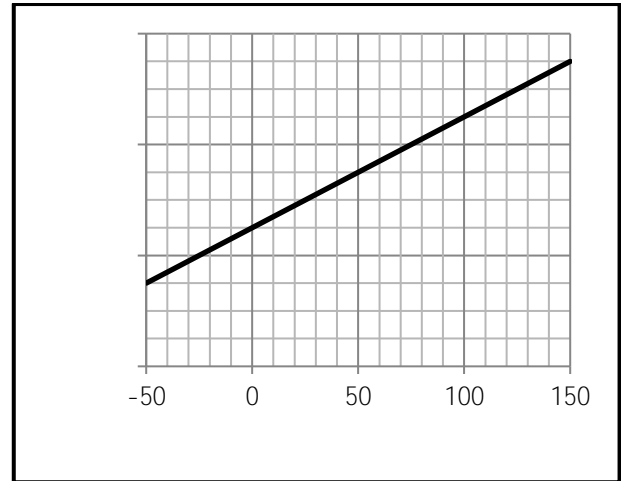


Fig.10  $I_D$ -Junction Temperature

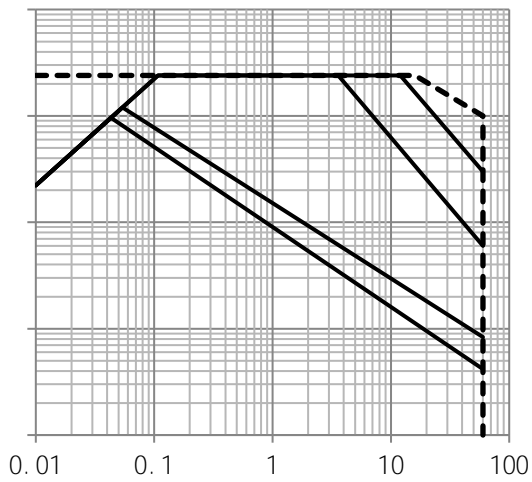


Fig.11 Switching Time Measurement Circuit

Fig.12 Gate Charge Waveform



Fig.13 Switching Time Measurement Circuit

Fig.14 Gate Charge Waveform

(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

