

**Product Summary**

The ZM027N03I combines advanced trench MOSFET technology with a low resistance package to provide extremely low  $R_{DS(ON)}$ . This device is ideal for load switch and battery protection applications.

$$V_{DS} = 30V$$

$$R_{DS(ON)} = 2.7m$$

$$I_D = 95A$$

Advance high cell density Trench technology  
 $R_{DS(ON)}$  to minimize conductive loss

0

nd Synchronous Rectifier

$T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_{D@TC=25}$	95	A
	$I_{D@TC=75}$	72	A
	$I_{D@TC=100}$	60	A
Pulsed Drain Current	$I_{DM}$	220	A
Total Power Dissipation	$P_D@TC=25$	70	W
Total Power Dissipation	$P_D@TA=25$	2.8	W
Operating Junction Temperature	$T_J$	-55 to 175	
Storage Temperature	$T_{STG}$	-55 to 175	
Single Pulse Avalanche Energy ( $L=0.5mH, V_{GS}=10V, R_g=25 \Omega$ )	$E_{AS}$	350	mJ



Single Pulse Avalanche Energy (L=0.1mH,VGS=10V,Rg=25 - )	$E_{AS}$	180	mJ
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**Thermal resistance**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	$R_{thJC}$	-	-	1.8	C/W
Thermal resistance, junction - ambient	$R_{thJA}$	-	-	45	C/W
Soldering temperature, wave soldering for 10s	$T_{sold}$	-	-	265	C



Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	$BV_{DSS}$					



Turn-ON Delay time

$t_{D(on)}$

12

$V_{GS}=10V, V_{DS}=15V$

$R_G = 3.3 \Omega, I_D = 15A$

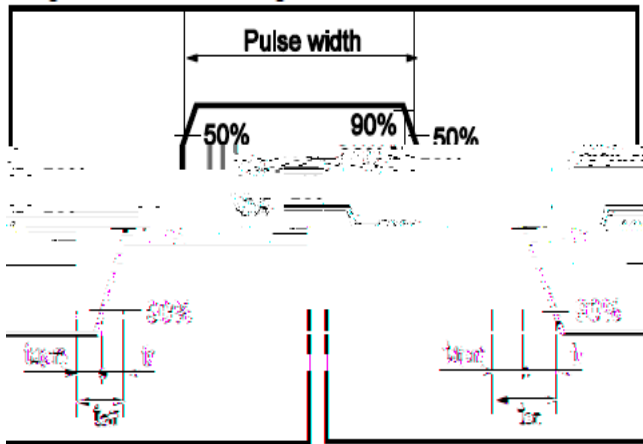




Figure 11. Gate-to-Source and  
Drain-to-Source Voltage vs. Total Charge

**Fig.12** Capacitance Variation

Fig.17 Gate Charge Waveform





**Dimensions(TO-251)**

Unit mm