

**B**

The ZM050N03S combines advanced trench MOSFET

Information: $T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	$I_D@T_C=25$	19	A
	$I_D@T_C=75$	14.4	A
	$I_D@T_C=100$	12.0	A
Pulsed Drain Current	I_{DM}	57	A
Total Power Dissipation	$P_D@T_C=25$	80	W
Total Power Dissipation	$P_D@T_A=25$	2.5	W
Operating Junction Temperature	T_J	-55 to 150	
Storage Temperature	T_{STG}	-55 to 150	
Single Pulse Avalanche Energy	E_{AS}	160	mJ

Thermal resistance

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	1.6	$^{\circ}C/W$
Thermal resistance, junction - ambient	R_{thJA}	-	-	50	$^{\circ}C/W$
Soldering temperature, wavesoldering for 10s	T_{sold}	-	-	265	$^{\circ}C$

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}	$V_{GS}=\pm 20V, V_{DS}=0V$			± 100	nA
Static Drain-source On Resistance	D_{6A}	$V_{GS}=10V, I_D=20A$		5.0	6.5	m
		$V_{GS}=4.5V, I_D=10A$		7.0	9.0	m
Forward Transconductance	g_{FS}	$V_{DS}=25V, I_D=10A$		16		S
Source-drain voltage	V_{SD}	$I_S=20A$			1.2×10^{-1}	





(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						