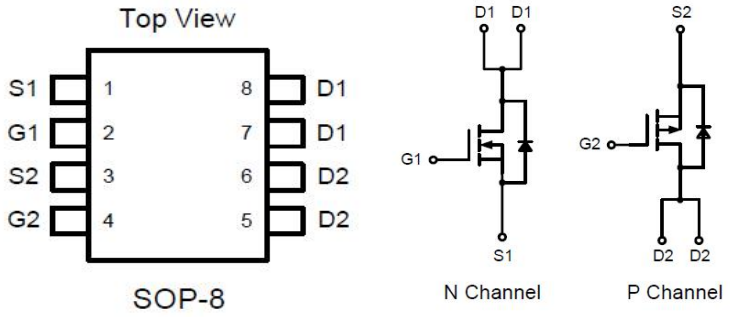
GENERAL DESCRIPTION

The RZC4606A uses advanced trench technology to provide excellent $R_{DS(ON)}$ and low gate charge.The complementary MOSFETs may be used to form a level shifted high side switch,and for a host of other applications.

PIN CONFIGURATION



FEATURES

- N-Channel
  30V/7A,
  $R_{DS(ON)}$=24mΩ (TYP.) @ V_{GS}=10V
  $R_{DS(ON)}$=34mΩ (TYP.) @ V_{GS}=4.5V
- P-Channel
  -30V/-5.3A,
  $R_{DS(ON)}$=53mΩ (TYP.) @ V_{GS}= -10V
  $R_{DS(ON)}$=80mΩ (TYP.) @ V_{GS}=-4.5V
- Super High Dense Cell Design
- Reliable and Rugged

APPLICTIONS

- Power Management in Notebook Computer
- Wireless Charger
- FAN Driver
- Portable Equipment
- Battery Powered Systems

ORDERING INFORMATION

Part Number	Package	Top Marking	Packing
RZC4606A	SOP-8	4606A	3000PCS/Real

MAXIMUM RATINGS (Ta = 25℃)

Parameter	Symbol		Value		Units
			N	P	
Drain to Source Voltage	V_{DSS}		30	-30	V
Gate to Source Voltage	V_{GSS}		±20	±25	V
Continuous Drain Current	I_D	25℃	7	-5.3	A
		85℃	5.6	-4.2	A
Pulsed Drain Current	$I_{D(pulse)}$		28	-21	A
Maximum Power Dissipation	$P_{D(25℃)}$		2		W
Operating Junction Temperature	T_J		+150		℃
Storage Temperature	T_{STG}		-55-+150		℃
Lead Temperature for Soldering Purposes(1/8″ from case for 10 s)	T_L		260		°C

ELECTRICAL CHARACTERISTICS (TA = 25℃)

N-Channel

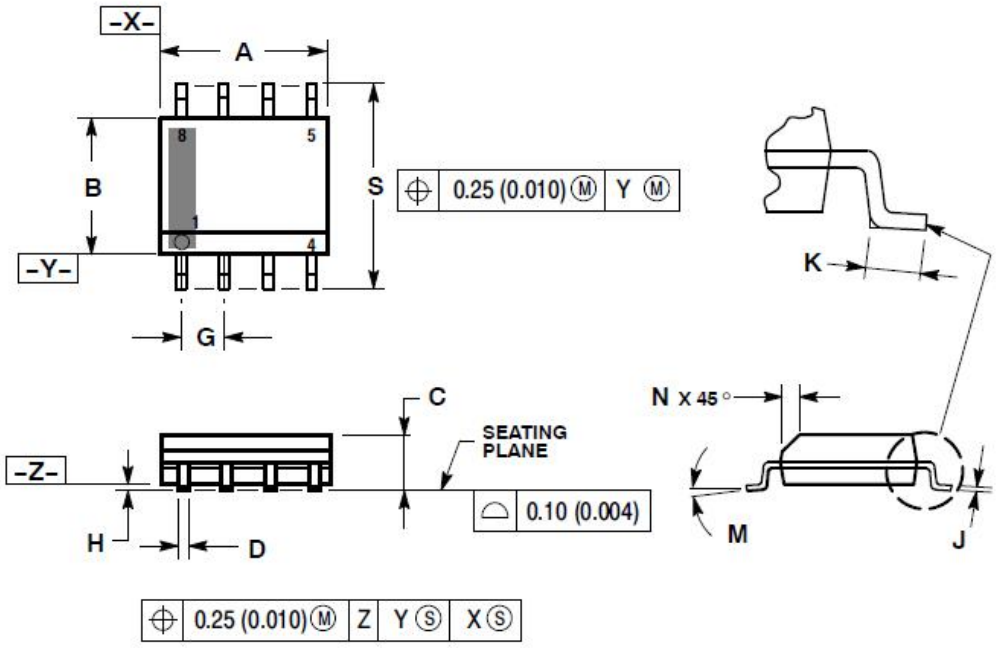
Parameter	Symbol	Test Conditions	MIN	TYP	MAX	Units
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V, I_{DS}=250uA	30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}= 30V,V_{GS}=0V			1	uA
Gate Leakage Current	I_{GSS}	V_{GS}=±20V,V_{DS}=0V			±100	nA
Gate threshold voltage	$V_{GS(TH)}$	V_{DS}=V_{GS},I_D= 250μA	1.3	1.7	2.1	V
Drain to Source On-state Resistance	$R_{DS(on)}$	V_{GS}=10V,I_D=3.0A		24	35	mΩ
		V_{GS}= 4.5V,I_D=3.0A		34	45	mΩ
Drain-Source Diode Forward Voltage	V_{SD}	Is=0.5A,V_{GS}=0V		0.8	1.3	V
Input Capacitance	C_{ISS}	V_{DS}=30V , V_{GS}=0V , f=1MHz		560		pF
Output Capacitance	C_{OSS}			125		pF
Reverse Transfer Capacitance	C_{RSS}			90		pF
Total Gate Charge	Q_G	V_{DS}=-0V , V_{GS}=10V , I_D=3A		7		nC
Gate-Source Charge	Q_{GS}			1.5		nC
Gate-Drain Charge	Q_{GD}			3		nC

P-Channel

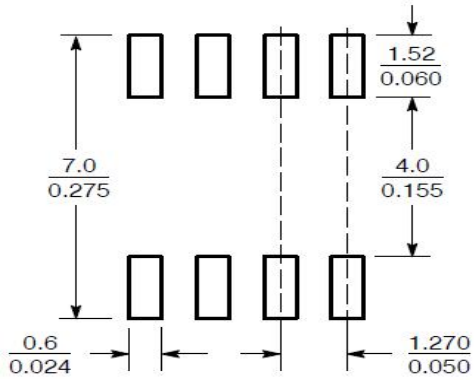
Parameter	Symbol	Test Conditions	MIN	TYP	MAX	Units
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V, I_{DS}=250uA	-30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}= -30V,V_{GS}=0V			-1	uA
Gate Leakage Current	I_{GSS}	V_{GS}=±25V,V_{DS}=0V			±100	nA
Gate threshold voltage	$V_{GS(TH)}$	V_{DS}=V_{GS},I_D= 250μA	-1.0	-1.6	-2.5	V
Drain to Source On-state Resistance	$R_{DS(on)}$	V_{GS}= -10V,I_D=-3.0A		48	58	mΩ
		V_{GS}=-4.5V,I_D=-3.0A		65	85	mΩ
Drain-Source Diode Forward Voltage	V_{SD}	Is=-1.7A,V_{GS}=0V		-0.7	-1.3	V
Input Capacitance	C_{ISS}	V_{DS}=-30V , V_{GS}=0V , f=1MHz		580		pF
Output Capacitance	C_{OSS}			98		pF
Reverse Transfer Capacitance	C_{RSS}			74		pF
Total Gate Charge	Q_G	V_{DS}=-30V , V_{GS}=-10V , I_D=-3A		10		nC
Gate-Source Charge	Q_{GS}			2		nC
Gate-Drain Charge	Q_{GD}			3		nC

PACKAGE DIMENSIONS

SOP-8



SOLDERING FOOTPRINT*



SCALE 6:1 (mm / inches)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.80	5.00	0.189	0.197
B	3.80	4.00	0.150	0.157
C	1.35	1.75	0.053	0.069
D	0.33	0.51	0.013	0.020
G	1.27 BSC		0.050 BSC	
H	0.10	0.25	0.004	0.010
J	0.19	0.25	0.007	0.010
K	0.40	1.27	0.016	0.050
M	0°	8°	0°	8°
N	0.25	0.50	0.010	0.020
S	5.80	6.20	0.228	0.244