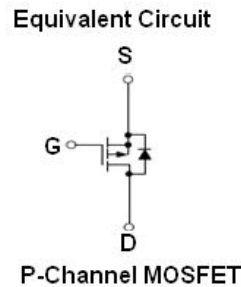
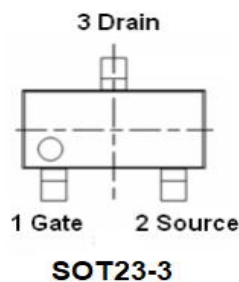




## GENERAL DESCRIPTION

The RZC3401 uses advanced trench technology to provide excellent  $R_{DS(ON)}$ . This device is suitable for use as a load switch or in PWM applications. Standard product RZC3401 is Pb-free (meets ROHS specifications). RZC3401 is a Green Product ordering option.

## PIN CONFIGURATION



## FEATURES

- $V_{DS} \cong -30V$ ;
- $I_{D(MAX)} = -3A$  (SOT23)  
 $I_{D(MAX)} = -5.7A$  (SOT23-3)
- Low on-state resistance  
 $R_{DS(on)} = 55m\Omega$  MAX. @  $V_{GS} = -10V$   
 $R_{DS(on)} = 65m\Omega$  MAX. @  $V_{GS} = -4.5V$   
 $R_{DS(on)} = 110m\Omega$  MAX. @  $V_{GS} = -2.5V$
- Super High Dense Cell Design
- Reliable and Rugged
- Lead Free and Green Devices Available (RoHS Compliant)

## APPLICATIONS

- High Side Load Switch
- Power Management in LCD TV, Monitor, Notebook Computer, Portable Equipment and Battery Powered Systems

## Ordering and Marking Information

Part Number	Package	Top Marking	Packing
RZC3401C	SOT23-3	A19T	3000PCS/Real
RZC3401	SOT23	A19T	3000PCS/Real

**MAXIMUM RATINGS** (Ta = 25°C)

Parameter	Symbol	Value	Units	
Drain to Source Voltage	V <sub>DSS</sub>	-30	V	
Gate to Source Voltage	V <sub>GSS</sub>	±12	V	
Continuous Drain Current(SOT23)	25°C	I <sub>D</sub>	-3.0	A
	85°C		-2.4	A
Continuous Drain Current(SOT23-3)	25°C	I <sub>D</sub>	-5.7	A
	85°C		-4.5	A
Pulsed Drain Current	SOT23	I <sub>D(pulse)</sub>	-12	A
	SOT23-3		-22	A
Diode Continuous Forward Current	I <sub>S</sub>	-1	A	
Maximum Power Dissipation	25°C	SOT23	0.8	W
		SOT23-3	1.0	W
Operating Junction Temperature	T <sub>J</sub>	+150	°C/W	
Storage Temperature	T <sub>STG</sub>	-55-+150	°C	
Lead Temperature for Soldering Purposes(1/8" from case for 10 s)	T <sub>L</sub>	260	°C	

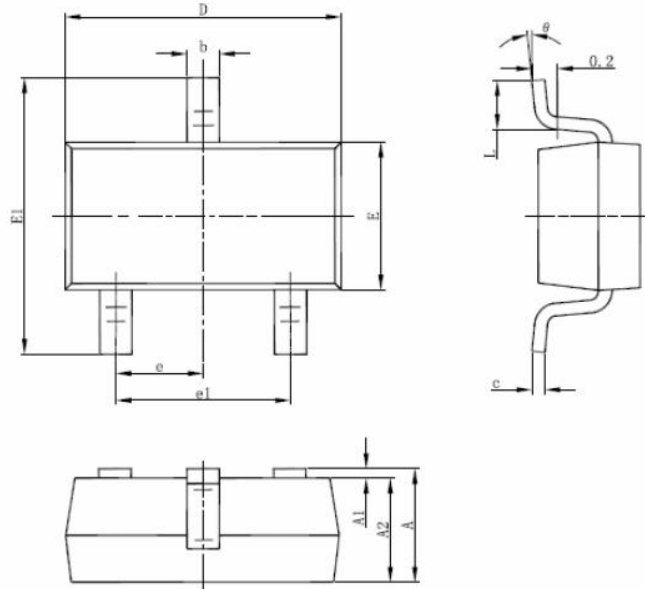
**ELECTRICAL CHARACTERISTICS** (TA = 25°C)

Parameter	Symbol	Test Conditions	MIN	TYP	MAX	Unit
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	V <sub>GS</sub> =0V, I <sub>DS</sub> =-250uA	-30			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-27V, V <sub>GS</sub> =0V			-0.1	uA
Gate Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±12V, V <sub>DS</sub> =0V			±100	nA
Gate threshold voltage	V <sub>GS(TH)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =-250μA	-0.6	-0.9	-1.3	V
Drain to Source On-state Resistance	R <sub>DS(ON)</sub>	V <sub>GS</sub> =-10V, I <sub>D</sub> =-3.0A		45	55	mΩ
		V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-3.0A		55	65	mΩ
		V <sub>GS</sub> =-2.5V, I <sub>D</sub> =-2.0A		95	110	mΩ
Drain-Source Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-1A, V <sub>GS</sub> =0V			-1.3	V



## PACKAGE DIMENSIONS

## SOT-23-3



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
$\theta$	0°	8°	0°	8°

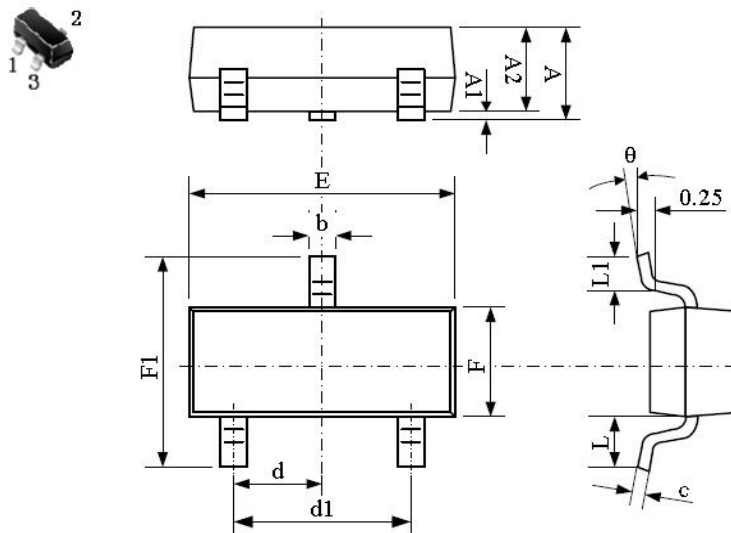
**Note:**

1. Dimension D does not include mold flash, protrusions or gate burrs. mold flash, protrusions or gate burrs shall not exceed 0.10mm per side.
2. Dimension E1 does not include inter-lead flash or protrusion. Inter-lead flash or protrusion shall not exceed 0.1mm per side.



PACKAGE DIMENSIONS

SOT-23



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
d	0.950 TYP		0.037 TYP	
d1	1.800	2.000	0.071	0.079
E	2.800	3.000	0.110	0.118
F	1.200	1.400	0.047	0.055
F1	2.250	2.550	0.089	0.100
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Note:

1. Dimension D does not include mold flash, protrusions or gate burrs. mold flash, protrusions or gate burrs shall not exceed 0.10mm per side.
2. Dimension E1 does not include inter-lead flash or protrusion. Inter-lead flash or protrusion shall not exceed 0.1mm per side.