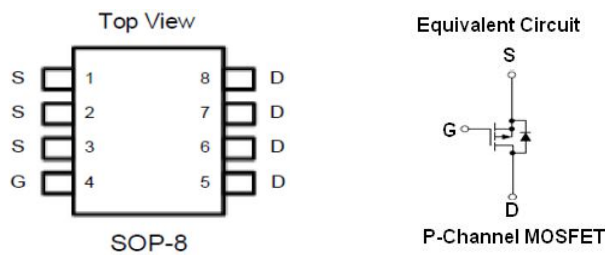




## GENERAL DESCRIPTION

The RZC3115 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 RZC3115 is Pb-free (meets ROHS specifications). RZC3115 is a Green Product ordering option.

## PIN CONFIGURATION



## FEATURES

- $V_{DS(max)} = -30V$ ;
- $I_{D(max)} = -10A$
- Low on-state resistance  
 $R_{DS(on)} \leq 9m\Omega$  MAX. ( $V_{GS} = -10V$ )  
 $R_{DS(on)} \leq 14m\Omega$  MAX. ( $V_{GS} = -4.5V$ )
- 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 INFORMATION

Part Number	Package	Top Marking	Packing
RZC3115	SOP-8	S3115	3000PCS/Real

**MAXIMUM RATINGS** ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Units	
Drain to Source Voltage	$V_{DSS}$	-30	V	
Gate to Source Voltage	$V_{GSS}$	$\pm 20$	V	
Continuous Drain Current	$I_D$	$25^\circ\text{C}$	-10	A
		$85^\circ\text{C}$	-8.0	A
Pulsed Drain Current	$I_{D(pulse)}$	-40	A	
Maximum Power Dissipation	$P_D(25^\circ\text{C})$	1.5	W	
Operating Junction Temperature	$T_J$	+150	$^\circ\text{C}$	
Storage Temperature	$T_{STG}$	-55-+150	$^\circ\text{C}$	
Lead Temperature for Soldering Purposes(1/8" from case for 10 s)	$T_L$	260	$^\circ\text{C}$	

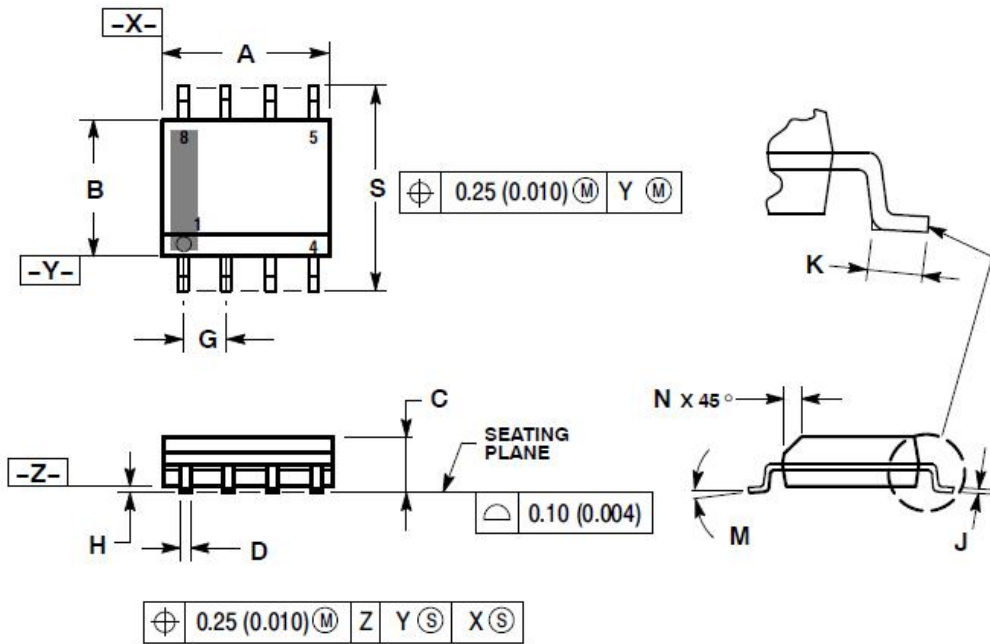
**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$ )

Parameter	Symbol	Test Conditions	MIN	TYP	MAX	Units
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V, I_{DS}=-250\mu A$	-30			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=-30V, V_{GS}=0V$			-1	$\mu A$
Gate Leakage Current	$I_{GSS}$	$V_{GS}=\pm 20V, V_{DS}=0V$			$\pm 100$	nA
Gate threshold voltage	$V_{GS(TH)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1.0	-2.0	-2.5	V
Drain to Source On-state Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-5.0A$		7	9	$m\Omega$
		$V_{GS}=-4.5V, I_D=-3.0A$		12	14	$m\Omega$
Drain-Source Diode Forward Voltage	$V_{SD}$	$I_S=1A, V_{GS}=0V$		0.8	1.3	V
Input Capacitance	$C_{ISS}$	$V_{DS}=-20V, V_{GS}=0V, f=1MHz$		3448		pF
Output Capacitance	$C_{OSS}$			505		pF
Reverse Transfer Capacitance	$C_{RSS}$			420		pF
Total Gate Charge	$Q_g$	$V_{DS}=-20V, V_{GS}=-10V, I_D=-8A$		30		nC
Gate-Source Charge	$Q_{gs}$			10		nC
Gate-Drain Charge	$Q_{gd}$			11		nC

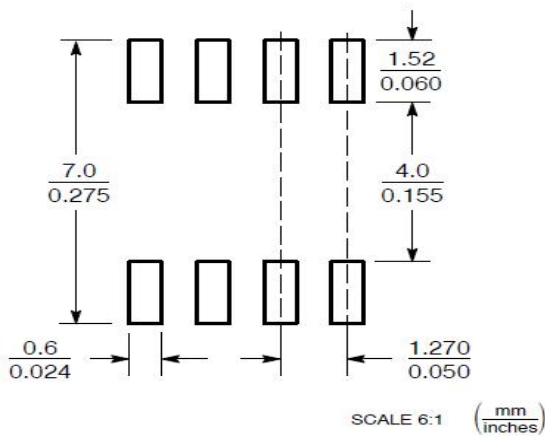


PACKAGE DIMENSIONS

SOP-8



SOLDERING FOOTPRINT\*



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