

60V (D-S) Small Signal MOSFET

UM2362S SOT23-3

UM2362P SOT323

General Description

The UM2362 is a low threshold N-channel MOSFET, which has low on-resistance, high reliability and stability, as well as fast switch capability and high saturation current. This benefit provides the designer with an extremely efficient device for use in battery and load management applications. The devices use a space-saving, small-outline SOT23-3 or SOT323 package.

Applications

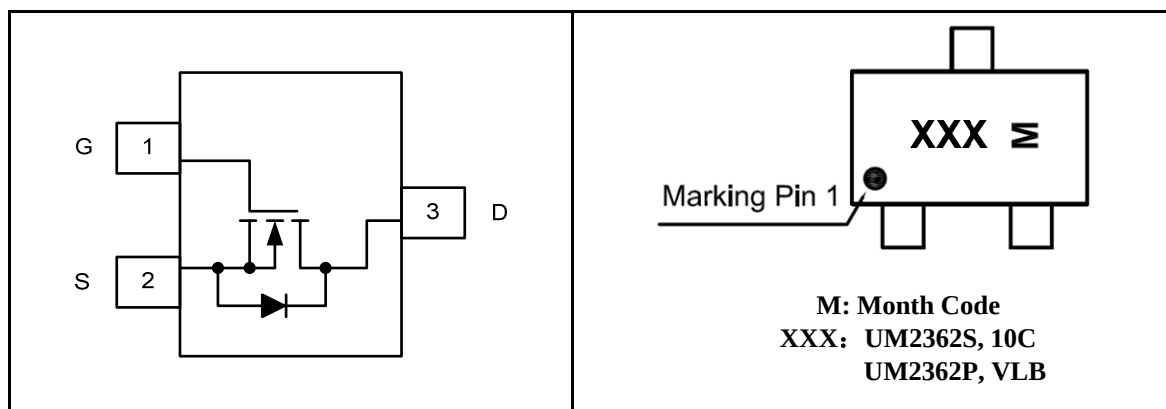
- Battery Packs
- Battery-powered Portable Equipment
- Cellular and Cordless Telephones

Features

- Drain-Source Voltage(max): 60V
- Low On-Resistance(typ):
1.2Ω@V_{GS}=10V
1.7Ω@V_{GS}=5V
- Continuous Drain Current(max):
115mA@25°C

Pin Configurations

Top View



Ordering Information

Part Number	Packaging Type	Marking Code	Shipping Qty
UM2362S	SOT23-3	10C	3000pcs/7 Inch Tape & Reel
UM2362P	SOT323	VLB	3000pcs/7 Inch Tape & Reel

Absolute Maximum Ratings ($T_{amb}=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Units
V_{DSS}	Drain-Source voltage	60	V
V_{GS}	Gate-Source voltage	± 20	V
I_D	Continuous Drain Current	115	mA
P_D	Power Dissipation	200	mW
T_J	Junction Temperature	+150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_{amb}=25^{\circ}\text{C}$, Unless otherwise noted)

Symbol	Parameter	Test Condition	Min	Typ	Max	Unit
Off Characteristics						
BV_{DSS}	Drain to Source Breakdown Voltage	$V_{GS}=0\text{V}, I_D=10\mu\text{A}$	60			V
		$V_{GS}=0\text{V}, I_D=3\text{mA}$	60			
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=60\text{V}, V_{GS}=0\text{V}$			1	μA
I_{GSS}	Gate-to-Source Leakage Current	$V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$			± 100	nA
On Characteristics						
$R_{DS(ON)}^*$	Static Drain-to-Source On-Resistance	$V_{GS}=10\text{V}, I_D=500\text{mA}$		1.2	7.5	Ω
		$V_{GS}=5\text{V}, I_D=50\text{mA}$		1.7	7.5	
$V_{GS(TH)}^*$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1		2.5	V
$I_{D(ON)}^*$	Drain-to-Source On Current	$V_{GS}=10\text{V}, V_{DS}=7\text{V}$	500			mA
$V_{DS(ON)}^*$	Drain-to-Source On Voltage	$V_{GS}=10\text{V}, I_D=500\text{mA}$			3.75	V
		$V_{GS}=5\text{V}, I_D=50\text{mA}$			0.375	
g_{fs}^*	Forward Transconductance	$V_{DS}=10\text{V}, I_D=200\text{mA}$	80			mS
Drain-Source Diode Characteristics and Maximum Ratings						
V_{SD}	Forward Diode Voltage	$V_{GS}=0\text{V}, I_S=115\text{mA}$			1.2	V

*Pulse test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

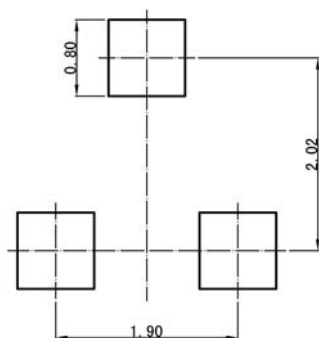
Package Information

UM2362S SOT23-3

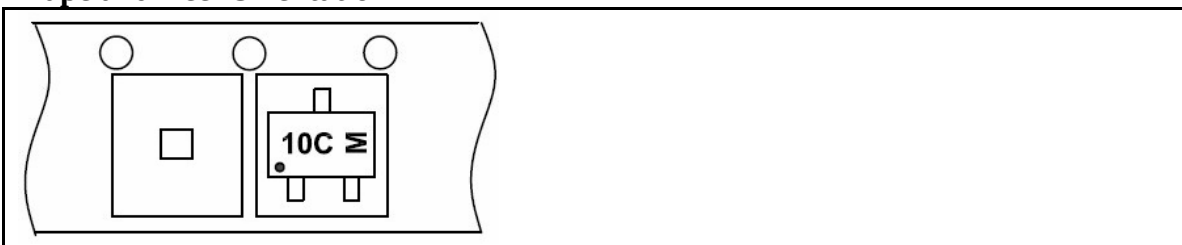
Outline Drawing

DIMENSIONS				
Symbol	MILLIMETERS		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	0.950REF		0.037REF	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

Land Pattern

	NOTES: - Compound dimension: 2.92×1.60; - Unit: mm; - General tolerance ±0.05mm unless otherwise specified; - The layout is just for reference.
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Tape and Reel Orientation



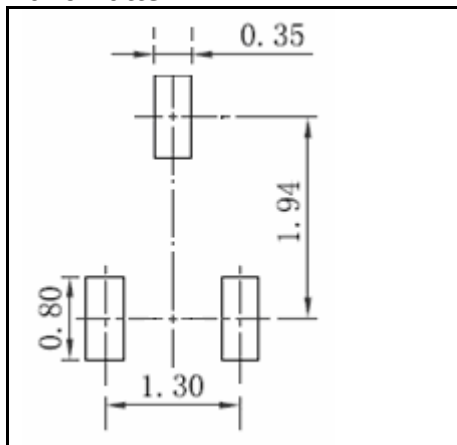
Package Information

UM2362P SOT323

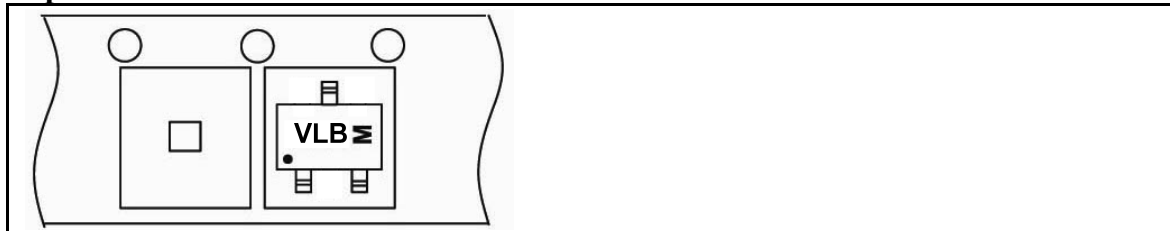
Outline Drawing

DIMENSIONS				
Symbol	MILLIMETERS		INCHES	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.877	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.080	0.220	0.003	0.009
D	1.800	2.200	0.071	0.087
E	1.150	1.350	0.045	0.053
E1	2.000	2.450	0.079	0.096
e	0.650REF		0.026REF	
e1	1.200	1.400	0.047	0.055
L	0.488REF		0.020REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

Land Pattern

	NOTES: - Compound dimension: 2.10×1.25; - Unit: mm; - General tolerance ±0.05mm unless otherwise specified; - The layout is just for reference.
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Tape and Reel Orientation


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