

Power Mosfet Wafer (P-Type 60V)

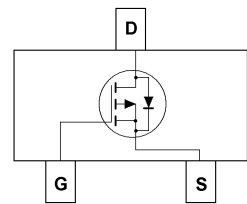
Features

-60V / 3A $R_{DS(ON)} \leq 92 \text{ m}\Omega @ V_{GS} = -10 \text{ V}$
 $R_{DS(ON)} \leq 125 \text{ m}\Omega @ V_{GS} = -4.5 \text{ V}$

Advanced trench cell design

High speed switch

SOT-89 / SOT-23 For Surface Mount Package



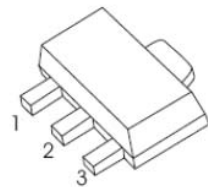
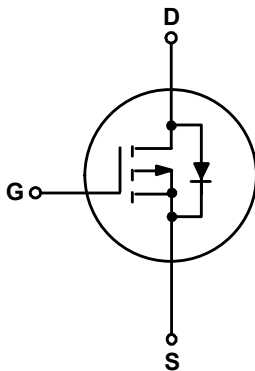
SOT-23 PLASTIC PACKAGE

Applications

Portable appliances

Battery management

Graphic Symbol



SOT-89

1. GATE 2. DRAIN 3. SOURCE

● Limiting Values

Symbol	Parameter	Rating	Unit
V_{DSS}	Drain-Source Voltage	- 60	V
V_{GSS}	Gate-Source Voltage	± 20	

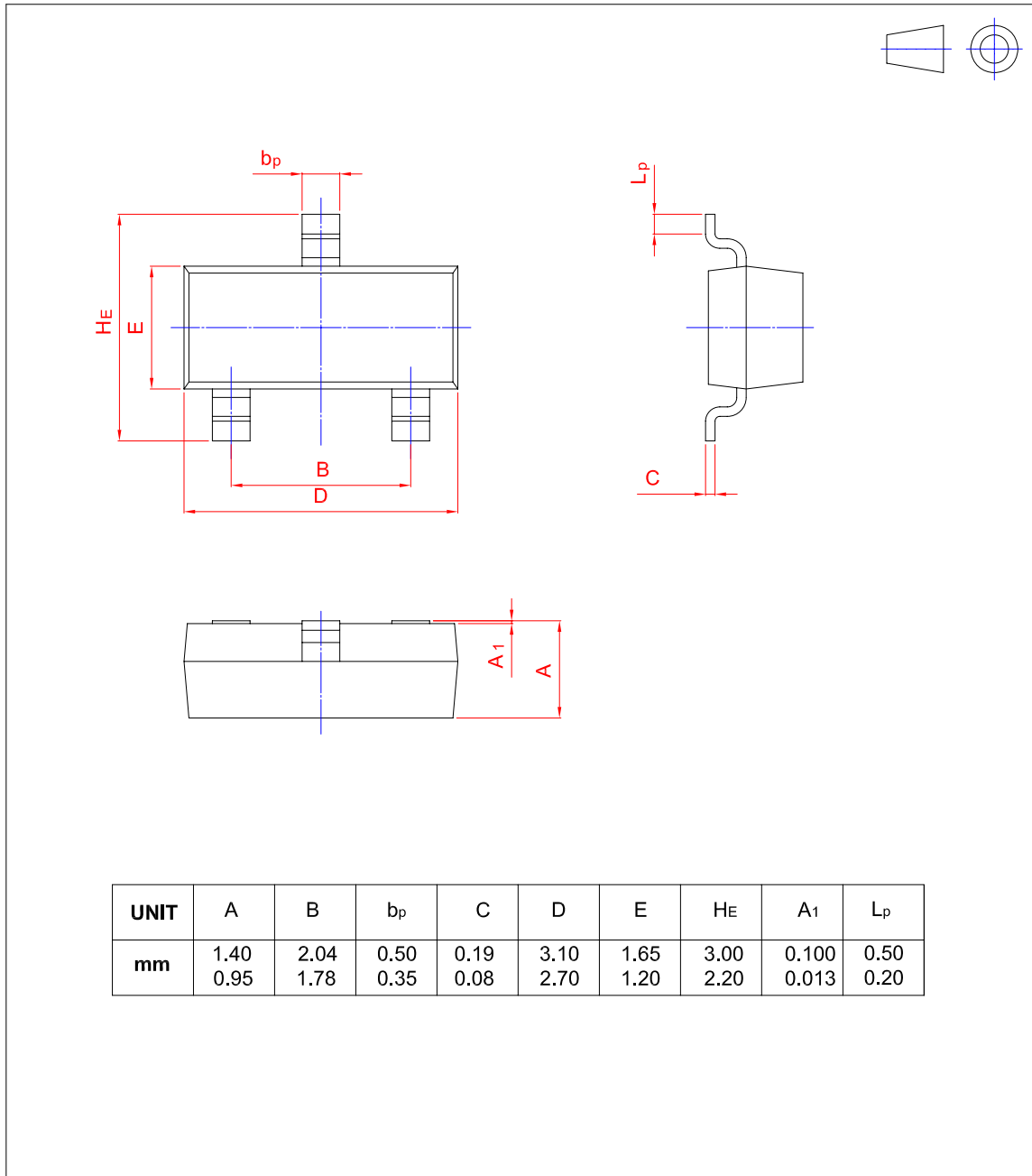
● **Electrical Characteristics (Ta = 25 °C Unless Otherwise Noted)**

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Static Characteristics						
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS} = 0\text{ V}, I_{DS} = -250\ \mu\text{A}$	-60	-	-	V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_{DS} = -250\ \mu\text{A}$	-1.3	-1.8	-2.5	V
I_{DSS}	Drain Leakage Current	$V_{DS} = -48\text{ V}, V_{GS} = 0\text{ V}$	-	-	-1	μA
		$T_J = 85\text{ }^\circ\text{C}$	-	-	-30	μA
I_{GSS}	Gate Leakage Current	$V_{GS} = \pm 20\text{ V}, V_{DS} = 0\text{ V}$	-	-	± 100	nA
$R_{DS(ON)}^a$	On-State Resistance	$V_{GS} = -10\text{ V}, I_{DS} = -0.5\text{ A}$	-	73	92	m Ω
		$V_{GS} = -4.5\text{ V}, I_{DS} = -0.5\text{ A}$	-	95	125	
Diode Characteristics						
V_{SD}	Diode Forward Voltage	$I_{SD} = -0.5\text{ A}, V_{GS} = 0\text{ V}$	-	-0.7	-1.3	V

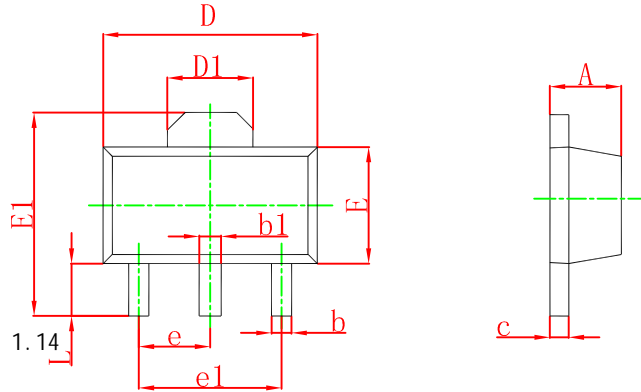
PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23

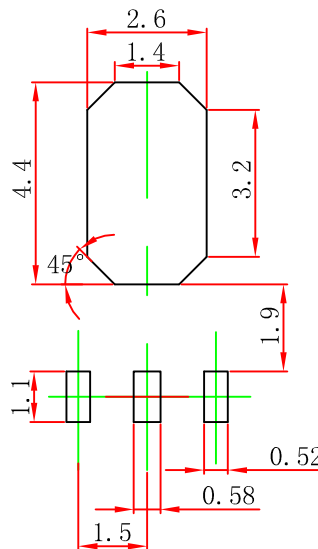


SOT-89 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

SOT-89 Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.