

Power Mosfet (P-Type 40V)

Features

Advanced trench cell design

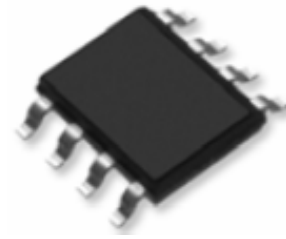
High speed switch

$BV \geq -40\text{ V}$

$R_{DS(ON)} \leq 15\text{ m}\Omega @ V_{GS} = -10\text{ V}$

$R_{DS(ON)} \leq 21\text{ m}\Omega @ V_{GS} = -4.5\text{ V}$

BV_{DSS}	$R_{DS(ON),typ.}$	I_D
40V	12m Ω	22A

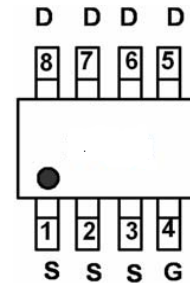


SOP-8 top view

Applications

Portable appliances

Battery management



Marking and pin assignment

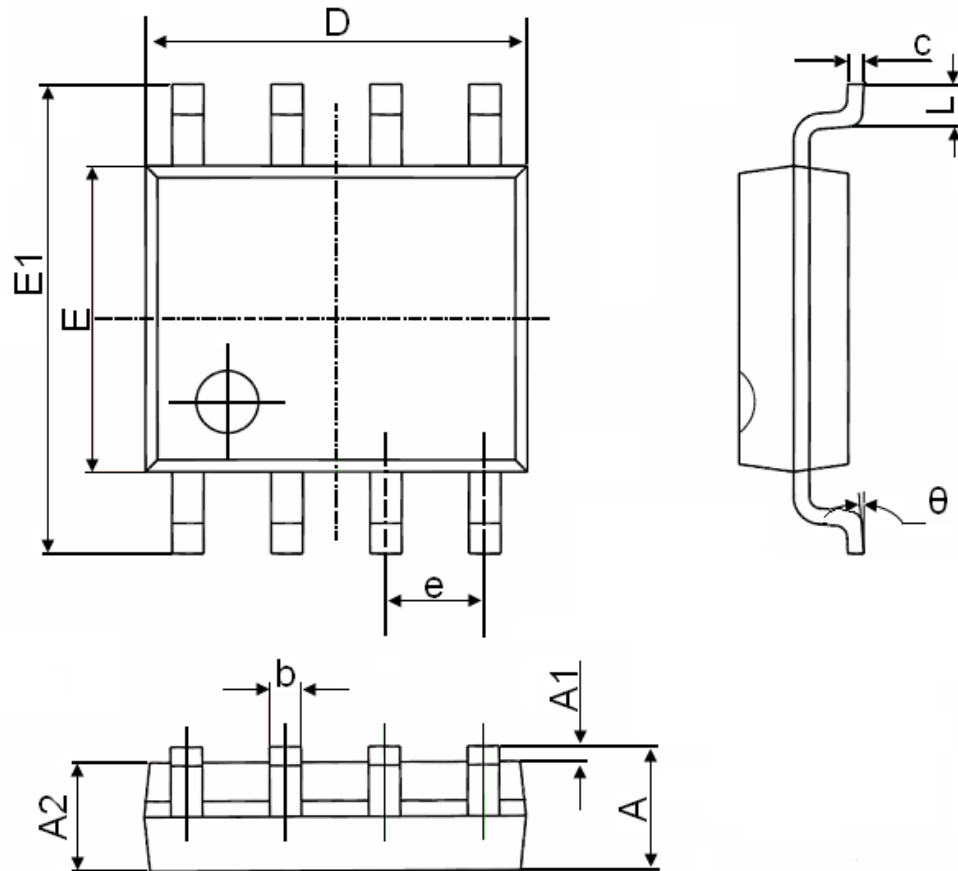
● Limiting Values

Symbol	Parameter	Rating	Unit
V_{DSS}	Drain-Source Voltage	- 40	V
V_{GSS}	Gate-Source Voltage	± 20	
I_D	Continuous Drain Current	22	A
$T_J \& T_{STG}$	Operating and Storage Temperature Range	-55 to 150	$^{\circ}\text{C}$

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Static Characteristics						
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS} = 0\text{ V}, I_{DS} = -250\ \mu\text{A}$	-40	-	-	V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_{DS} = -250\ \mu\text{A}$	-1.0	-1.5	-2.0	V
I_{DSS}	Drain Leakage Current	$V_{DS} = -32\text{ V}, V_{GS} = 0\text{ V}$	-	-	-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	$V_{GS} = -10\text{ V}, I_{DS} = -1\text{ A}$	-	12	15	m Ω
		$V_{GS} = -4.5\text{ V}, I_{DS} = -1\text{ A}$	-	16	21	
Diode Characteristics						
V_{SD}	Diode Forward Voltage	$I_{SD} = -0.5\text{ A}, V_{GS} = 0\text{ V}$	-	-0.7	-1.3	V

SOP-8 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°