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FDN306P

Single P-Channel PowerTrench MOSFET

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Product Summary

BV_{DSS}	- 12V
$R_{DS(ON)}$	40mΩ
I_D	- 2.6A

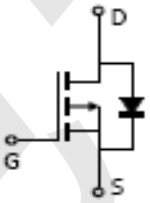
Application

- Load/Power Switching
- Interfacing Switching
- Logic Level Shift

Package and Pin Configuration

SOT-23

Circuit diagram



Marking: 306P

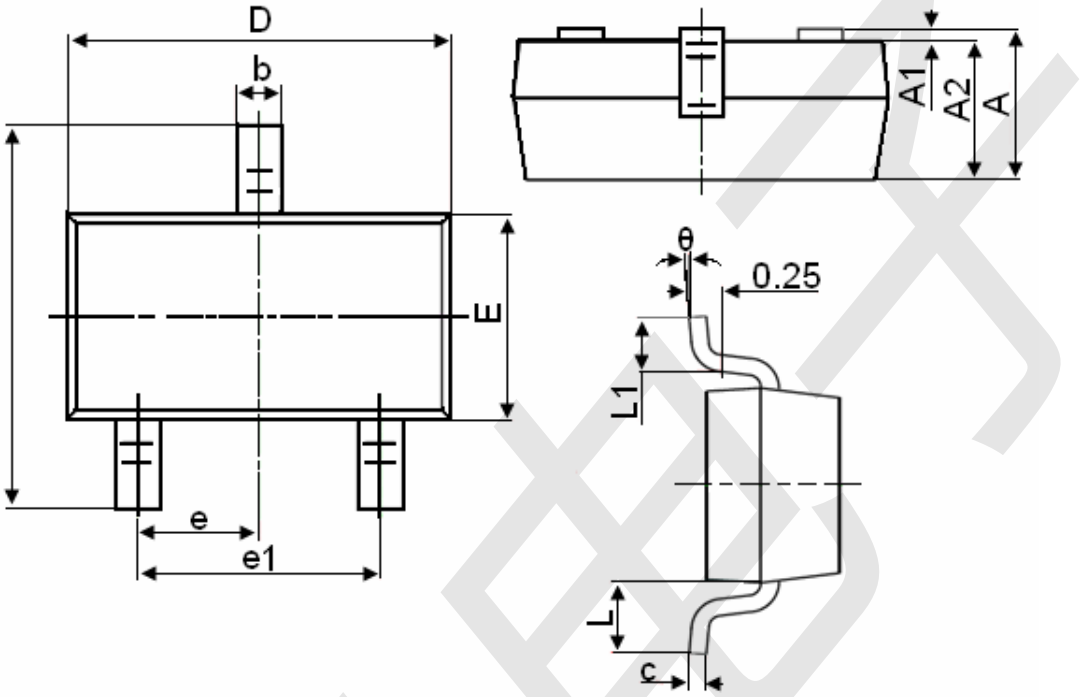
Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Symbol	Parameter		Max.	Units
V_{DSS}	Drain-Source Voltage		-12	V
V_{GSS}	Gate-Source Voltage		±8	V
I_D	Continuous Drain Current	T_A= 25℃	-2.6	A
I_{DM}	Pulsed Drain Current note1		-10	A
P_D	Power Dissipation	T_A= 25℃	0.45	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient		150	℃/W
T_J, T_{STG}	Operating and Storage Temperature Range		-55 to +150	℃

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristic						
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}=0V,I_D= -250μA	-12	-	-	V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} = -20V, V_{GS} = 0V,	-	-	-1	μA
I_{GSS}	Gate to Body Leakage Current	V_{DS} =0V, V_{GS} = ±20V	-	-	±100	nA
On Characteristics						
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= V_{GS}, I_D= -250μA	-0.4	-	-1.5	V
$R_{DS(on)}$	Static Drain-Source on-Resistance note2	V_{GS} =-4.5V, I_D =-2.6A	-	-	40	mΩ
		V_{GS} =-2.5V, I_D =-2.3A	-	-	50	
		V_{GS} =-1.8V, I_D =-1.8A			80	
V_{SD}	Drain to Source Diode Forward Voltage				-1.2	V
Dynamic Characteristics						
C_{iss}	Input Capacitance	V_{DS} = -10V, V_{GS} = 0V, f =1 MHZ	-	1138	-	pF
C_{oss}	Output Capacitance		-	454	-	pF
Switching Characteristics						
$t_{d(on)}$	Turn-on Delay Time	(VDS= 5V, VGS= 4.5V , RGEN=6Ω)	-	11	-	ns
$t_{d(off)}$	Turn-off Delay Time		-	38	-	ns

SOT-23 Package Information



Symbol	Dimensions in Millimeters	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°