

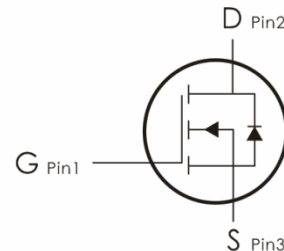
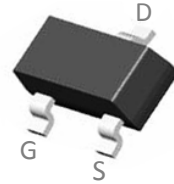
Description:

This N-Channel MOSFET uses advanced trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge.

It can be used in a wide variety of applications.

Features:

- 1) $V_{DS}=30V, I_D=5.8A, R_{DS(ON)} < 24m\Omega @ V_{GS}=10V$
- 2) Low gate charge.
- 3) Green device available.
- 4) Advanced high cell density trench technology for ultra $R_{DS(ON)}$.
- 5) Excellent package for good heat dissipation.



Absolute Maximum Ratings: ($T_A=25^\circ C$ unless otherwise noted)

Symbol	Parameter	Ratings	Units
V_{DS}	Drain-Source Voltage	30	V
V_{GS}	Gate-Source Voltage	± 12	V
I_D	Continuous Drain Current- $T_A=25^\circ C$	5.8	A
	Continuous Drain Current- $T_A=70^\circ C$	4.9	
I_{DM}	Pulsed Drain Current	30	
P_D	Power Dissipation a.b	1.6	W
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 to +150	$^\circ C$

Package Marking and Ordering Information:

Part NO.	Marking	Package
DO3400BA	A09T	SOT-23-3

Electrical Characteristics: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Off Characteristics						
BV _{DSS}	Drain-Sourtce Breakdown Voltage	V _{GS} =0V, I _D =250 μ A	30	---	---	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{GS} =0V, V _{DS} =24V	---	---	1	μ A
I _{GSS}	Gate-Source Leakage Current	V _{GS} =± 12V, V _{DS} =0A	---	---	±0.1	μ A
I _D	On–State Drain Current	V _{GS} =4.5V, V _{DS} =5V	30	---	---	A
On Characteristics						
V _{GS(th)}	GATE-Source Threshold Voltage	V _{GS} =V _{DS} , I _D =250 μ A	0.7	1	1.4	V
R _{DS(ON)}	Drain-Source On Resistance	V _{GS} =10V, I _D =5.8A	---	18	24	m Ω
		V _{GS} =4.5V, I _D =5A		22	30	
		V _{GS} =2.5V, I _D =4A	---	40	52	
G _{FS}	Forward Transconductance	V _{DS} =5V, I _D =5A	10	15	---	S
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{DS} =15V, V _{GS} =0V, f=1MHz	---	823	1030	pF
C _{oss}	Output Capacitance		---	99	---	
C _{rss}	Reverse Transfer Capacitance		---	77	---	
Switching Characteristics						
t _{d(on)}	Turn-On Delay Time	V _{DS} =15V, R _L =2.7Ω V _{GS} =10V, R _G =3 Ω	---	3.3	5	ns
t _r	Rise Time		---	4.8	7	ns
t _{d(off)}	Turn-Off Delay Time		---	26.3	40	ns
t _f	Fall Time		---	4.1	6	ns
Drain-Source Diode Characteristics						
V _{SD}	Source-Drain Diode Forward Voltage ²	V _{GS} =0V, I _S =1A	---	0.77	1	V

Electrical Characteristic Curve

