

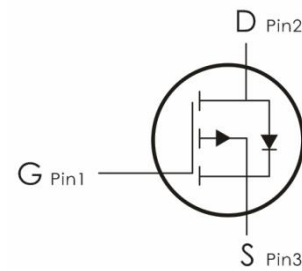
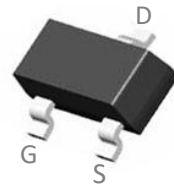
Description:

This P-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) $V_{DS}=-30V, I_D=-4.3A, R_{DS(on)}<52m\Omega @V_{GS}=-10V$
- 2) Low gate charge.
- 3) Green device available.
- 4) Advanced high cell density trench technology for ultra low $R_{DS(on)}$.
- 5) Excellent package for good heat dissipation.



Package Marking and Ordering Information:

Part NO.	Marking	Package	Packing
DO3401BA	A19T/3401B	SOT-23-3	3000pcs/Reel

Absolute Maximum Ratings: ($T_A=25^\circ\text{C}$ 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 $T_A=25^\circ\text{C}$	-4.3	A
	Continuous Drain Current $T_A=70^\circ\text{C}$	-3	A
I_{DM}	Pulsed Drain Current	-20	A
P_D	Power Dissipation	1.5	W
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 to +150	$^\circ\text{C}$

Thermal Characteristics:

Symbol	Parameter	Max	Units
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	83	$^\circ\text{C}/\text{W}$

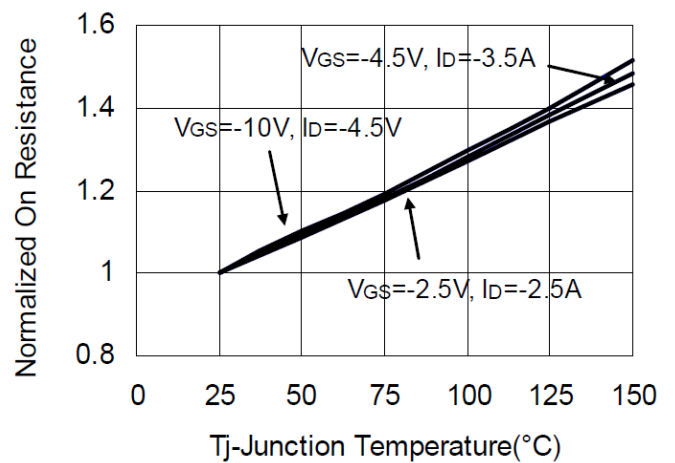
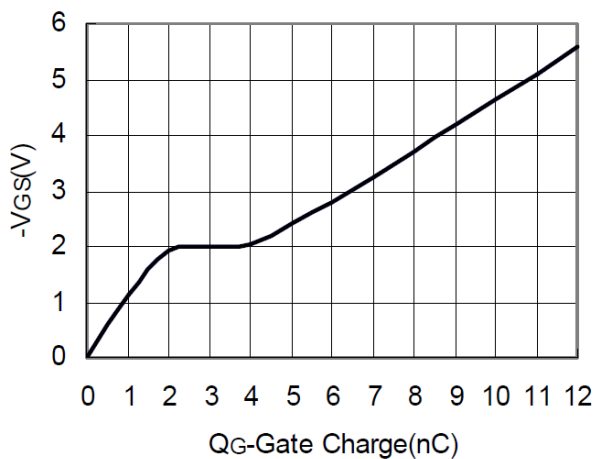
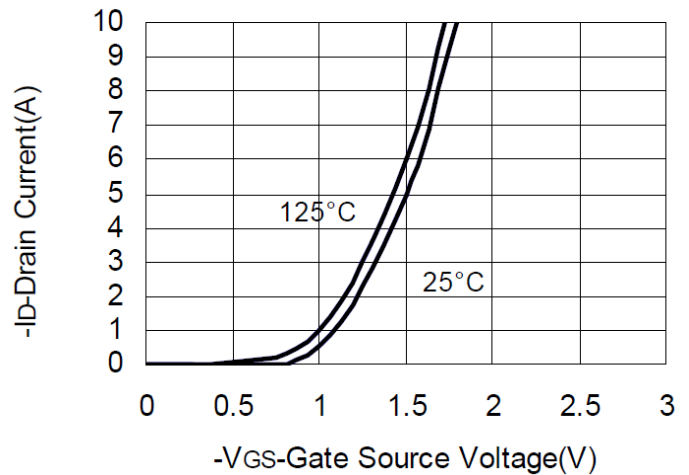
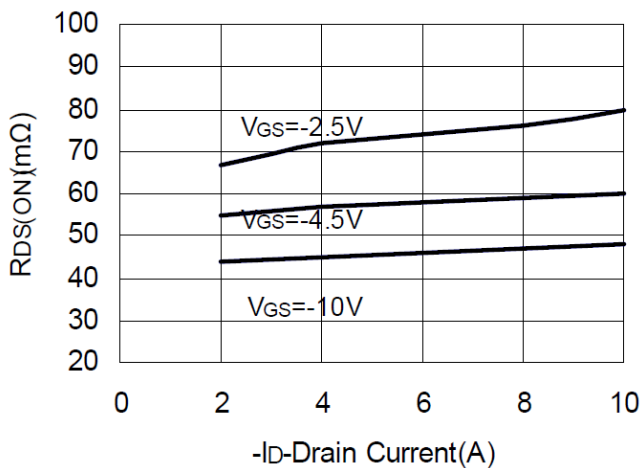
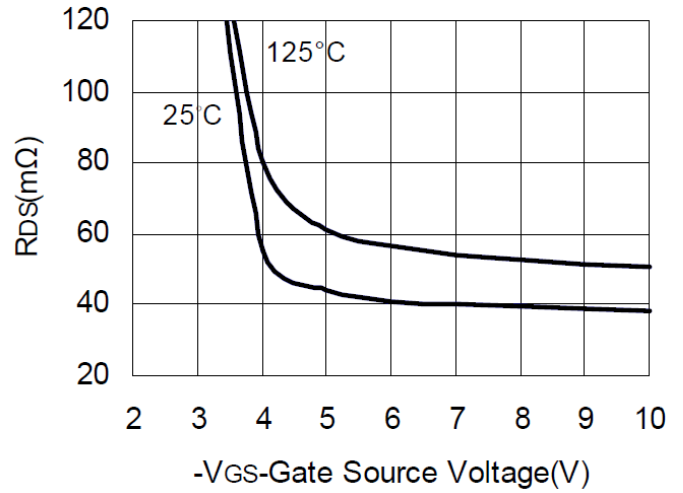
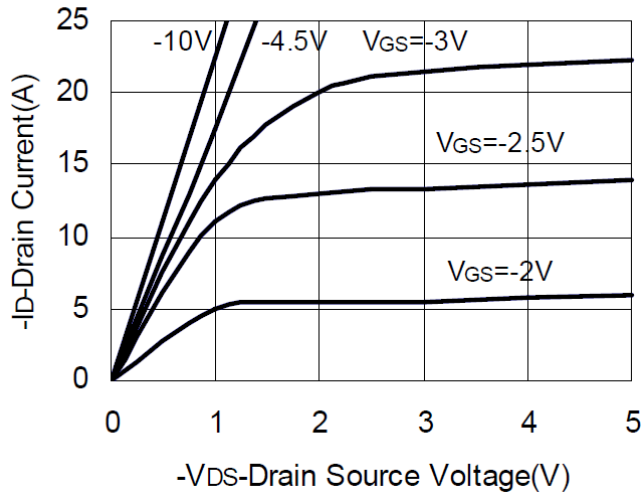
Electrical Characteristics: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Off Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250 μ A	-30	---	---	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{GS} =0V, V _{DS} =-30V	---	---	-1	μ A
I _{GSS}	Gate-Source Leakage Current	V _{GS} =± 12V, V _{DS} =0A	---	---	± 100	nA
On Characteristics						
V _{GS(th)}	Gate-Source Threshold Voltage	V _{GS} =V _{DS} , I _D =-250 μ A	-0.6	---	-1.2	V
R _{DS(ON)}	Drain-Source On-State Resistance	V _{GS} =-10V, I _D =-4.3A	---	40	52	m Ω
		V _{GS} =-4.5V, I _D =-3.5A	---	44	60	
		V _{GS} =-2.5V, I _D =-2.4A	---	55	72	
		Dynamic Characteristics				
C _{iss}	Input Capacitance	V _{DS} =-12V, V _{GS} =0V, f=1MHz	---	670	---	pF
C _{oss}	Output Capacitance		---	275	---	
C _{rss}	Reverse Transfer Capacitance		---	100	---	
Switching Characteristics						
t _{d(on)}	Turn-On Delay Time	V _{DS} =-12V, I _D =-4A V _{GEN} =-10V, R _G =3.3Ω	---	9	---	ns
t _r	Rise Time		---	15	---	ns
t _{d(off)}	Turn-Off Delay Time		---	23	---	ns
t _f	Fall Time		---	21	---	ns
Q _g	Total Gate Charge	V _{GS} =-4.5V, V _{DS} =-20V, I _D =-4A	---	6.2	---	nC
Q _{gs}	Gate-Source Charge		---	2.8	---	nC
Q _{gd}	Gate-Drain Charge		---	3	---	nC
Drain-Source Diode Characteristics						
V _{SD}	Diode forward voltage	I _S =-1A, V _{GS} =0V	---	-0.7	-1	V

Notes:

1. Pulse test: pulse width $\leq$ 300 μ S, duty cycle $\leq$ 2%
2. Static parameters are based on package level with recommended wire bonding

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



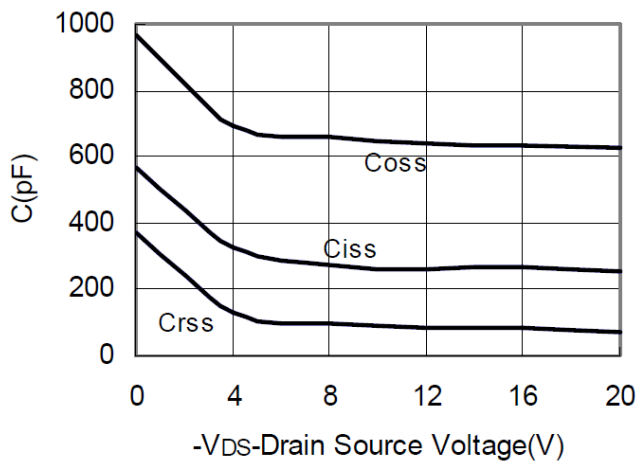


Fig7. Capacitance

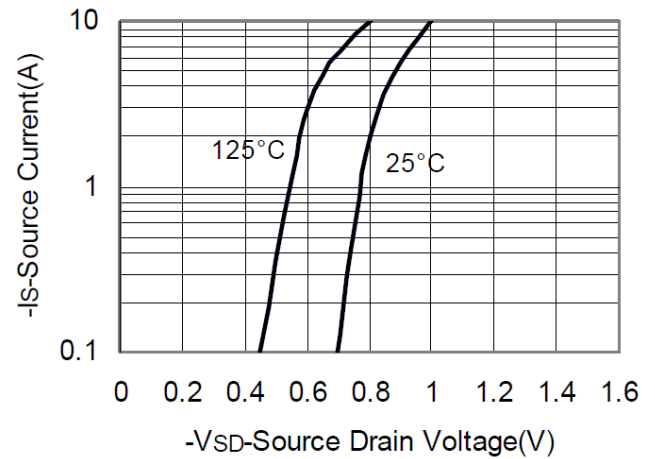


Fig8. Source Drain Diode Forward

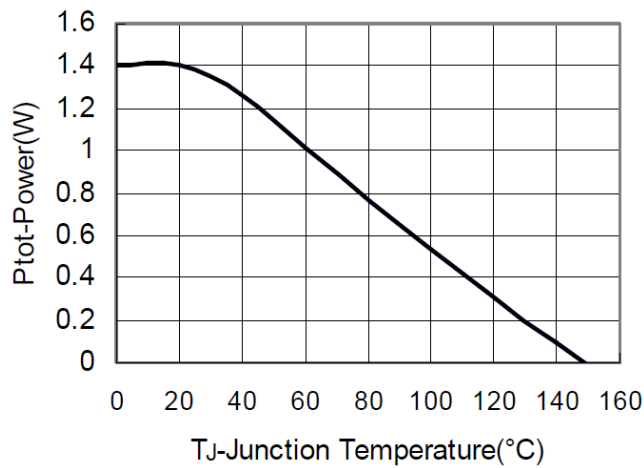


Fig9. Power Dissipation

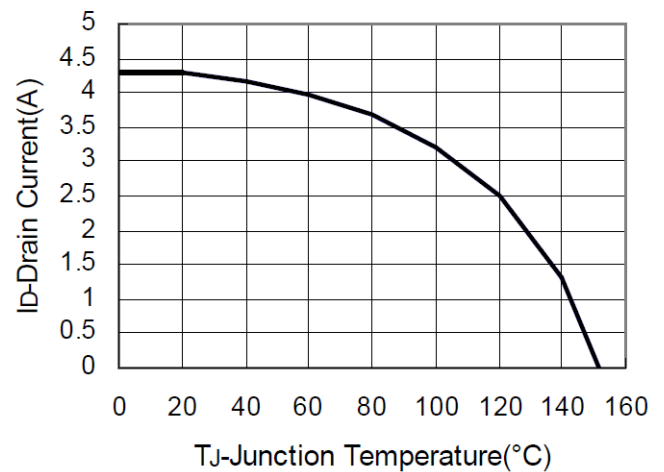


Fig10. Drain Current

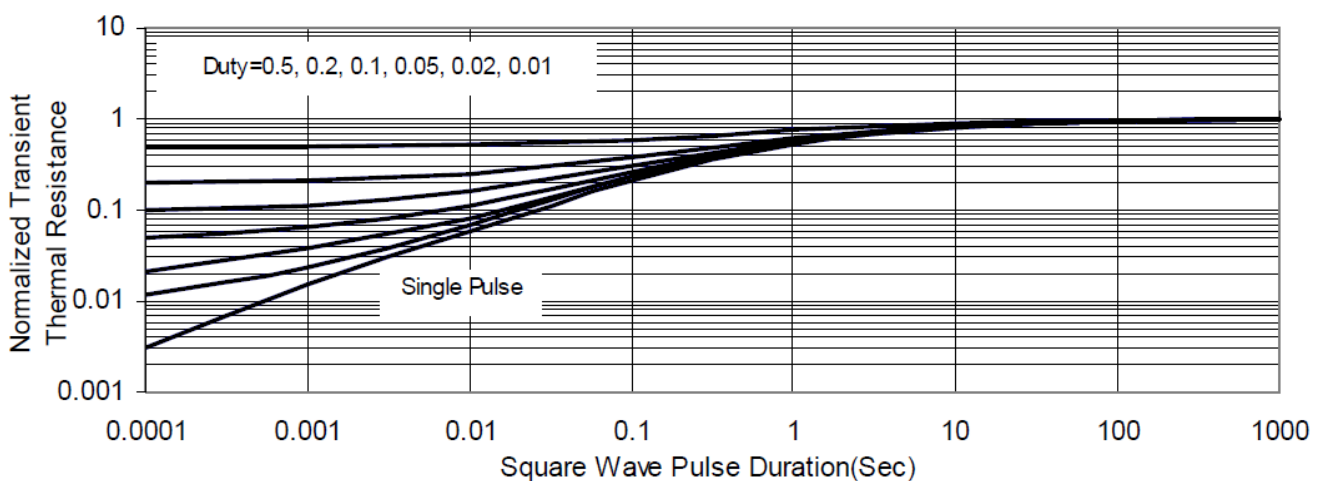
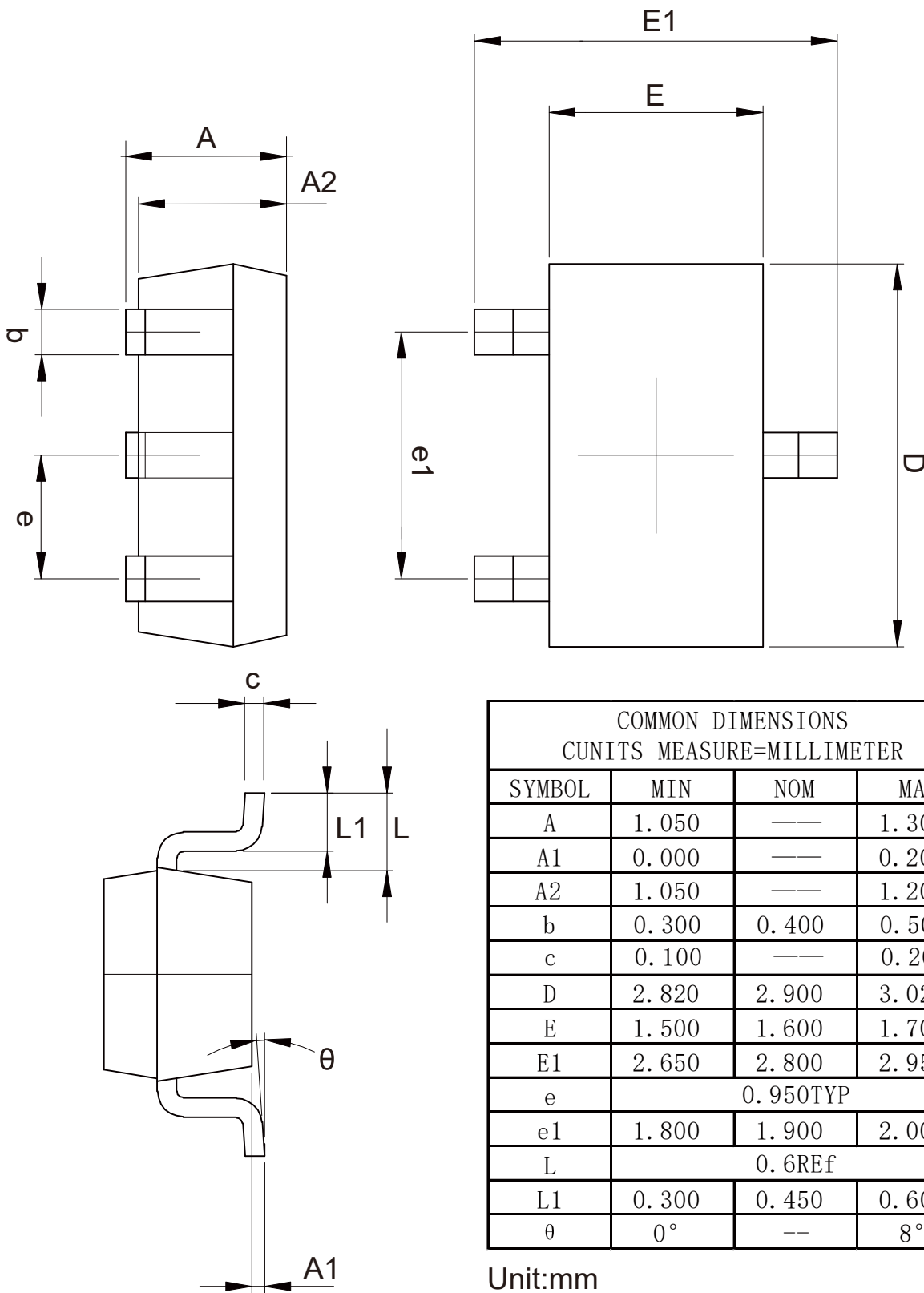
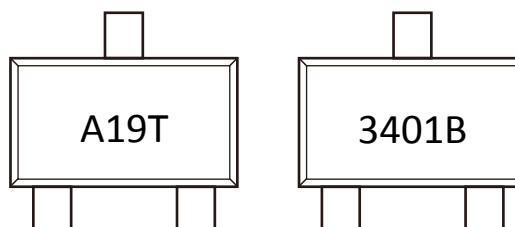


Fig11. Thermal Transient Impedance

SOT-23-3 Package Outline Data



Marking Information:



Previous Version

Version	Date	Subjects (major changes since last revision)
2.2	2026-06-06	Release of final version

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