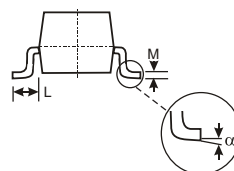
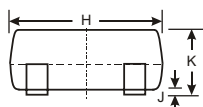
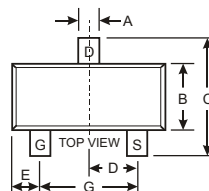


Features

- Super high density cell design for extremely low $R_{DS(ON)}$.
- Exceptional on-resistance and maximum DC current capability.
- We declare that the material of product compliance with RoHS requirements.



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		

APPLICATIONS

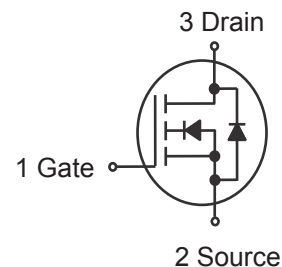
- Power Management in Notebook.
- Portable equipment.
- Battery powered system.
- Load switch.
- Marking Code:3400 OR A09T.

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 12	V
Drain Current	I_D	5.6	A
Peak Drain Current ¹⁾	I_{DM}	28	A
Power Dissipation	P_D	0.9	W
Thermal Resistance from Junction to Ambient (PCB mounted) ²⁾	$R_{\theta JA}$	139	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ Repetitive Rating: Pulse width limited by the Maximum junction temperature.

²⁾ 1 in² 2oz Cu PCB board.



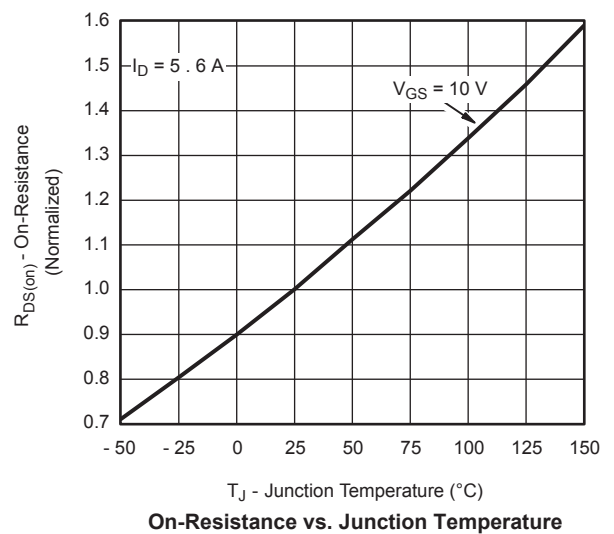
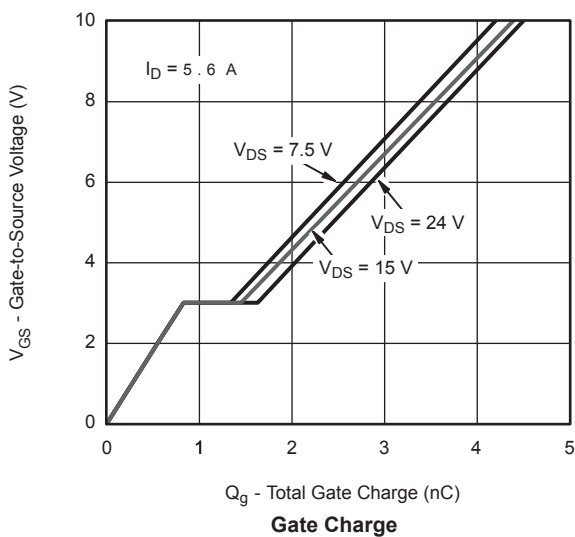
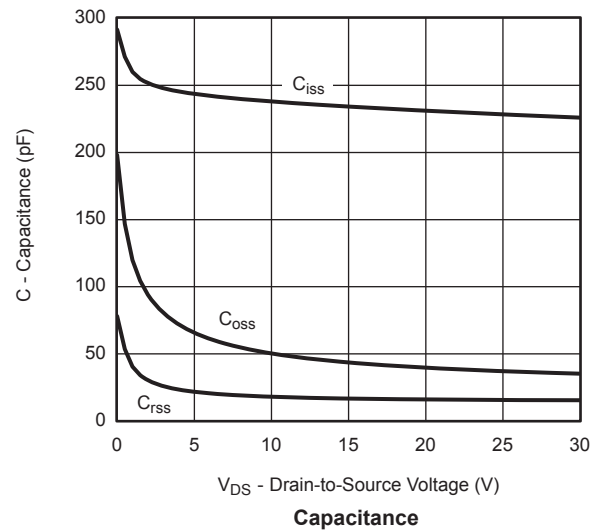
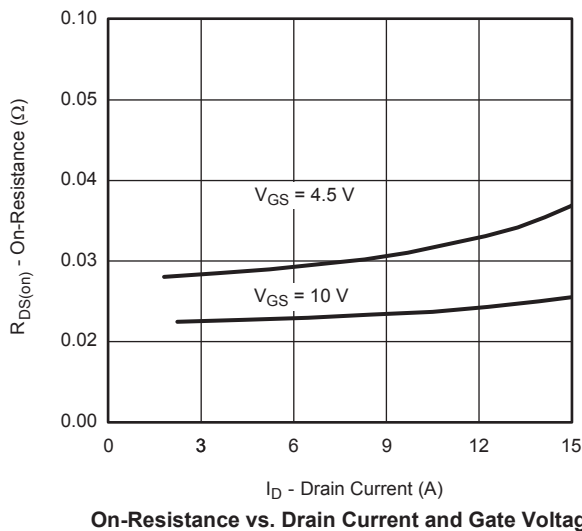
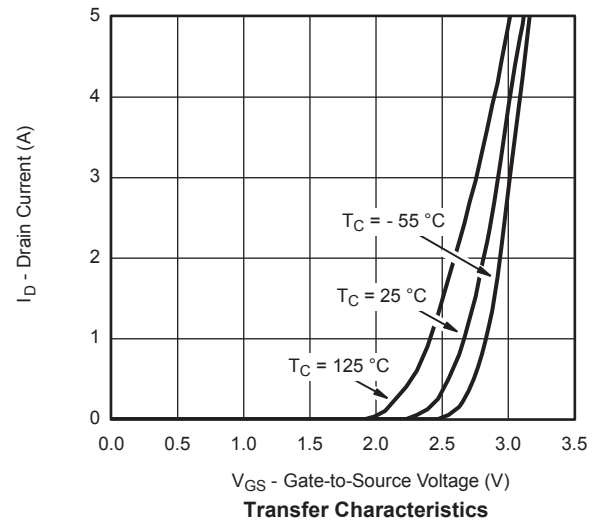
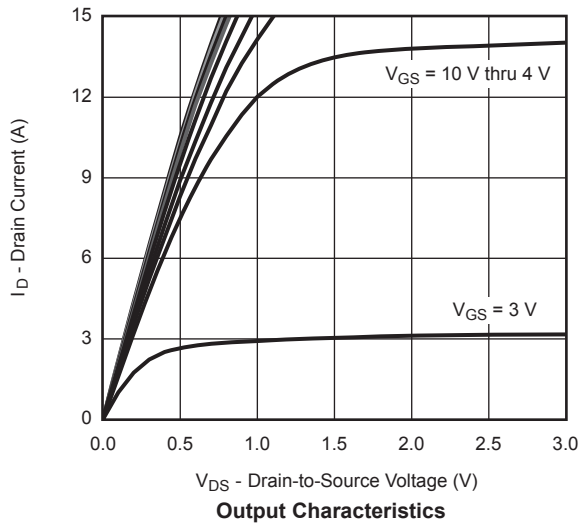
Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	30			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 30V, V_{GS} = 0V$			1	μA
Gate-source leakage current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0V$			± 100	nA
On characteristics						
Drain-source on-resistance (note 3)	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 5.6A$		30	35	m Ω
		$V_{GS} = 4.5V, I_D = 5A$		32	40	m Ω
		$V_{GS} = 2.5V, I_D = 4A$		36	57	m Ω
Forward tranconductance	g_{FS}	$V_{DS} = 5V, I_D = 5.6A$		8		S
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.5	0.85	1.3	V
Dynamic Characteristics (note 4,5)						
Input capacitance	C_{iss}	$V_{DS} = 15V, V_{GS} = 0V, f = 1MHz$		335		pF
Output capacitance	C_{oss}			45		pF
Reverse transfer capacitance	C_{rss}			17		pF
Gate resistance	R_g	$V_{DS} = 0V, V_{GS} = 0V, f = 1MHz$		4.4	8.8	Ω
Switching Characteristics (note 4,5)						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 10V, V_{DS} = 15V,$ $R_L = 2.7\Omega, R_{GEN} = 3\Omega$		5	10	ns
Turn-on rise time	t_r			12	20	ns
Turn-off delay time	$t_{d(off)}$			10	15	ns
Turn-off fall time	t_f			5	10	ns
Drain-source diode characteristics and maximum ratings						
Diode forward voltage (note 3)	V_{SD}	$I_S = 3.0A, V_{GS} = 0V$		0.8	1.2	V

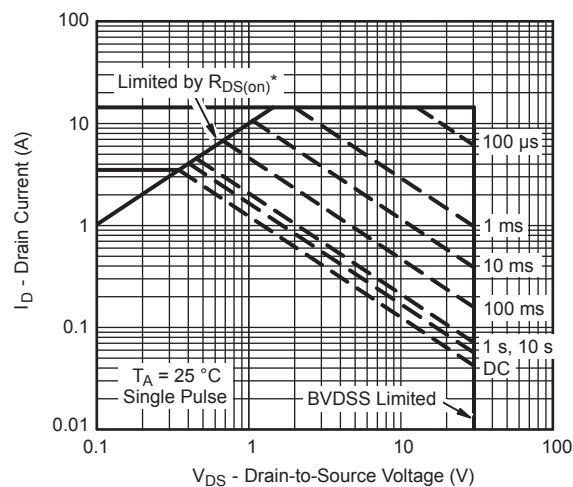
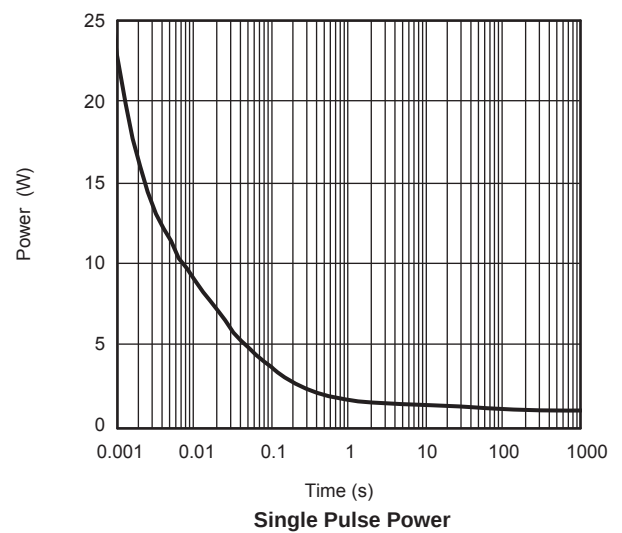
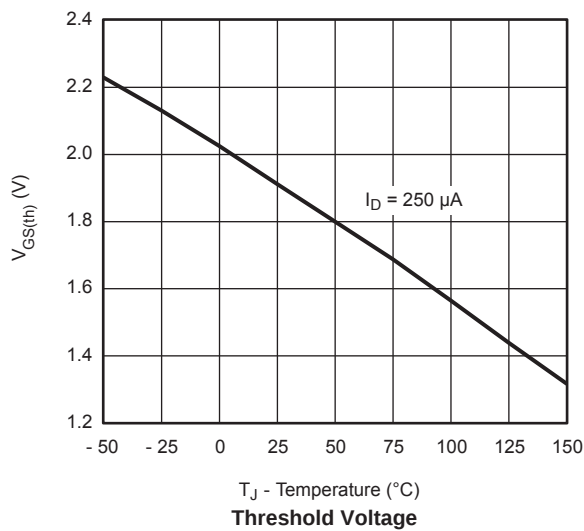
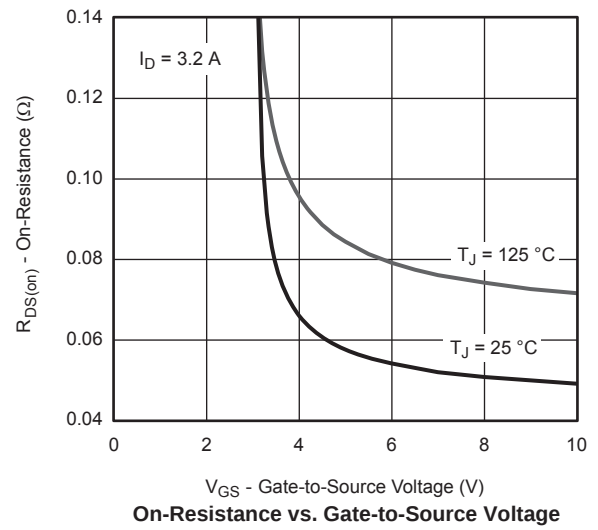
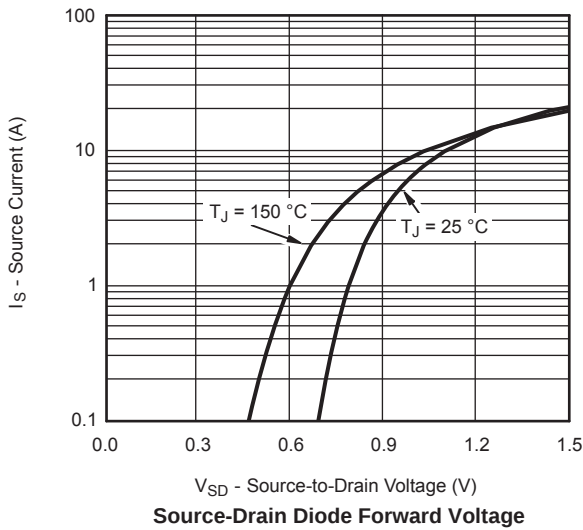
Note :

1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, $t < 5$ sec.
3. Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.
4. Guaranteed by design, not subject to production testing.

TYPICAL TRANSIENT CHARACTERISTICS



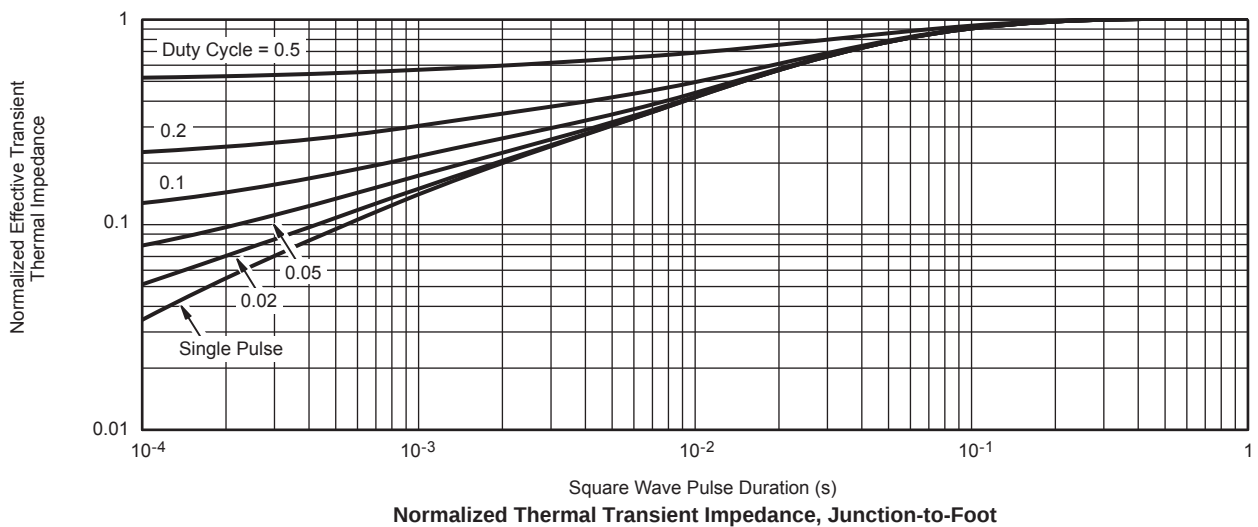
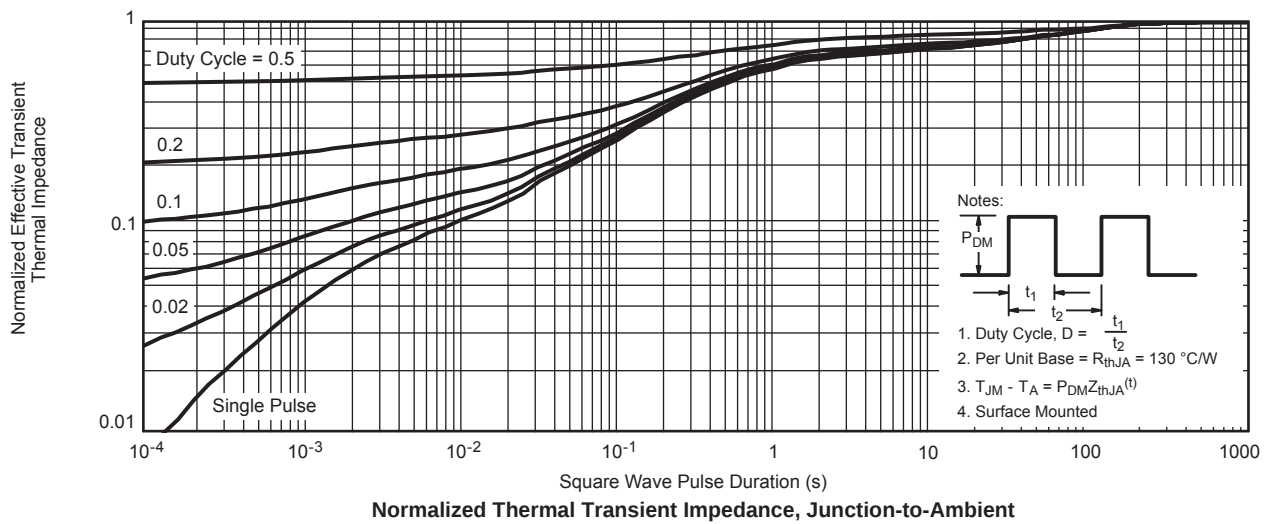
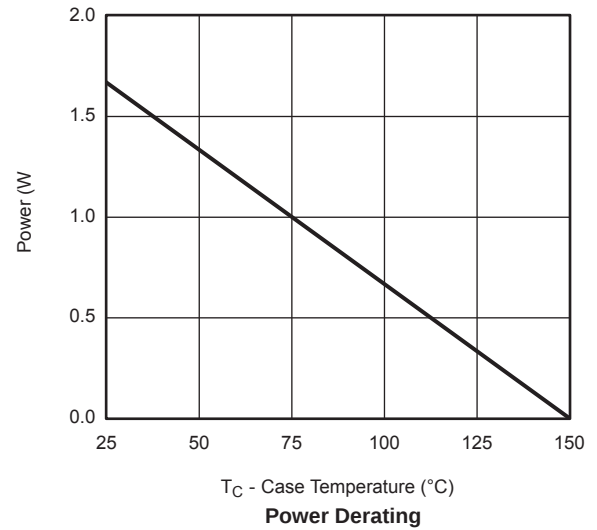
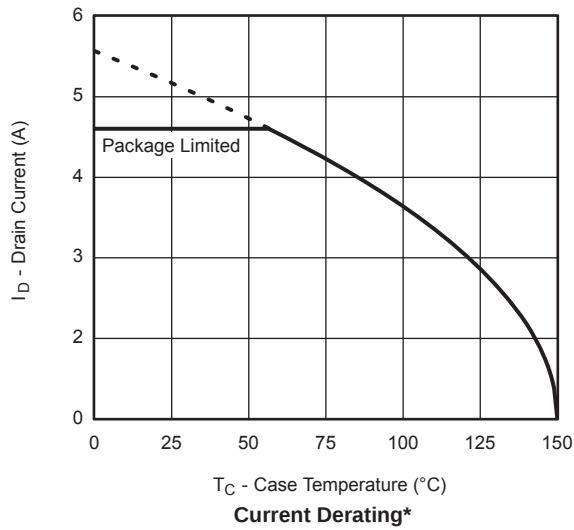
TYPICAL TRANSIENT CHARACTERISTICS



* $V_{GS} >$ minimum V_{GS} at which $R_{DS(on)}$ is specified

Safe Operating Area, Junction-to-Ambient

TYPICAL TRANSIENT CHARACTERISTICS



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