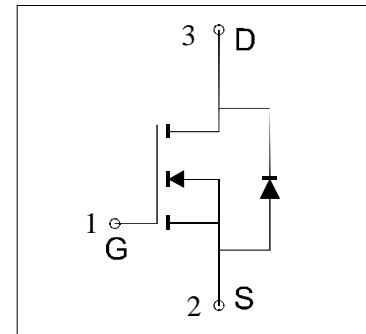


60V N-Channel Enhancement-Mode MOSFET

FEATURES

- $R_{DS(ON)} \leq 100m\Omega @ V_{GS}=10V$
- $R_{DS(ON)} \leq 130m\Omega @ V_{GS}=4.5V$
- $R_{DS(ON)} \leq 200m\Omega @ V_{GS}=3.3V$
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability
- Capable doing Cu wire bonding



APPLICATIONS

- Power Management in Note book
- Portable Equipment
- Battery Powered System
- Load Switch
- DSC

Ordering Information

Device	Marking	Shipping
FTK2308	N08	3000/Tape&Reel

Absolute Maximum Ratings ($T_A=25^\circ C$ Unless Otherwise Noted)

Parameter		Symbol	Limit	Unit
Drain- Source Voltage		V_{DSS}	60	V
Gate- Source Voltage		V_{GSS}	± 20	V
Continuous Drain Current ($T_J=150^\circ C$)	$T_A=25^\circ C$	I_D	2.6	A
	$T_A=70^\circ C$		1.8	
Pulsed Drain Current		I_{DM}	8	
Maximum Body- Diode Continuous Current		I_S	1.6	A
Maximum Power Dissipation	$T_A=25^\circ C$	P_D	0.7	W
	$T_A=70^\circ C$		0.45	
Operating Junction Temperature		T_J	150	$^\circ C$
Maximum Junction- to- Ambient	$T \leq 10 \text{ sec}$	R_{thJA}	150	$^\circ C/W$
	Steady State		175	
Thermal Resistance- Junction to Case		$R_{\theta JC}$	120	$^\circ C/W$

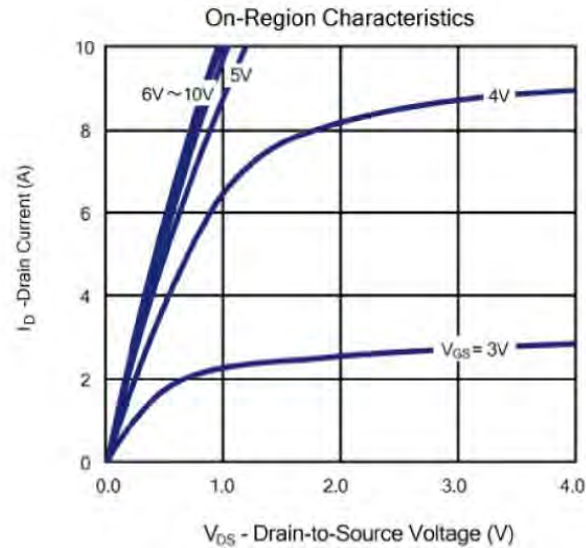
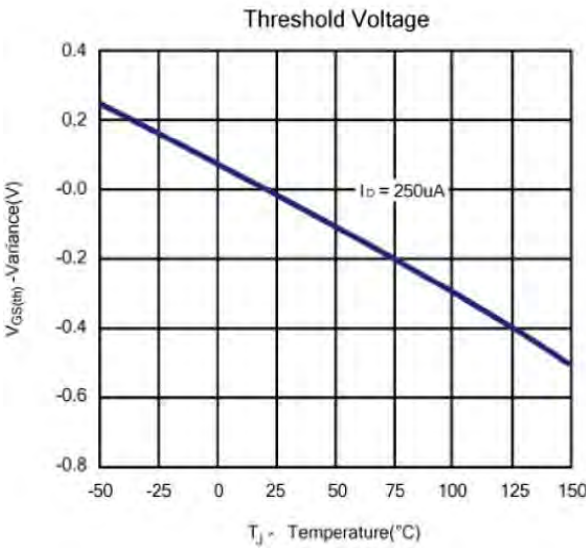
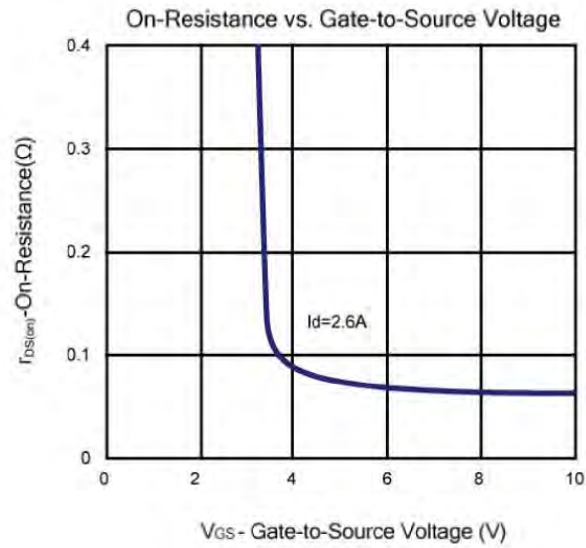
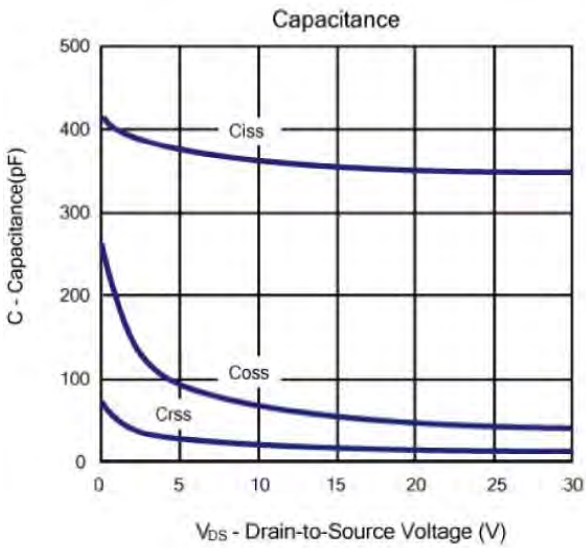
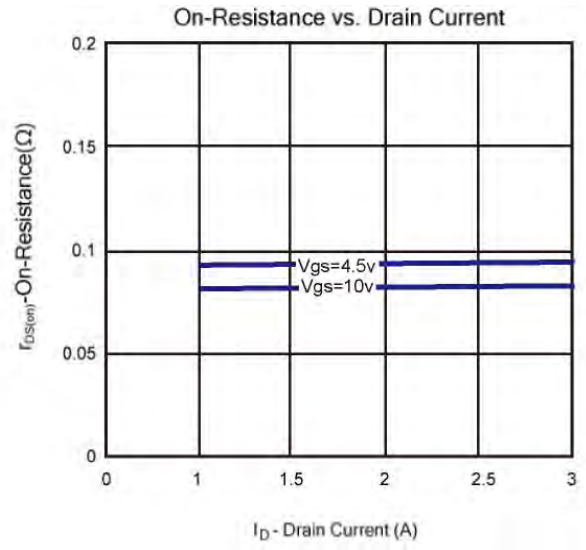
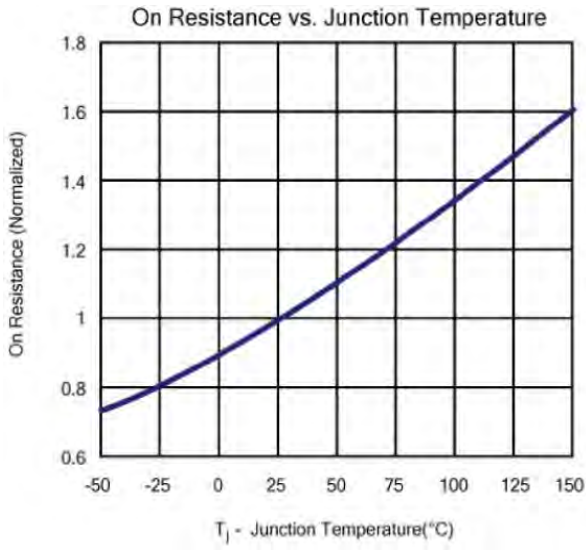
*The device mounted on 1in FR4 board with 2 oz copper

**Electrical Characteristics** ($T_a=25^{\circ}\text{C}$ Unless Otherwise Specified)

Symbol	Parameter	Limit	Min	Typ	Max	Unit
STATIC						
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0, I_D=250\mu\text{A}$	60			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1		3	V
I_{GSS}	Gate Body Leakage	$V_{DS}=0\text{V}, V_{GS}=\pm 20\text{V}$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=60\text{V}, V_{GS}=0\text{V}$			1	μA
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}, I_D=2.6\text{A}$		82	100	m Ω
		$V_{GS}=4.5\text{V}, I_D=2.1\text{A}$		96	130	
		$V_{GS}=3.3\text{V}, I_D=1.8\text{A}$		139	200	
V_{SD}	Diode Forward Voltage	$I_S=1.0\text{A}, V_{GS}=0\text{V}$		0.8	1.2	V
DYNAMIC						
Q_g	Total Gate Charge	$V_{DS}=30\text{V}, V_{GS}=10\text{V}, I_D=2.6\text{A}$		12		nC
Q_g	Total Gate Charge			6.5		
Q_{gs}	Gate-Source Charge	$V_{DS}=30\text{V}, V_{GS}=4.5\text{V}, I_D=2.6\text{A}$		2.2		
Q_{gd}	Gate-Drain Charge			2.7		
C_{iss}	Input capacitance			350		pF
C_{oss}	Output Capacitance	$V_{DS}=30\text{V}, V_{GS}=0\text{V}, f=1\text{MHz}$		40		
C_{rss}	Reverse Transfer Capacitance			12		
R_g	Gate Resistance	$V_{DS}=0\text{V}, V_{GS}=0\text{V}, f=1\text{MHz}$		0.7		Ω
$t_{d(on)}$	Turn-On Delay Time	$V_{DD}=20\text{V}, R_L=20\Omega$ $I_D=1\text{A}, V_{GEN}=10\text{V}$ $R_G=1\Omega$		10		ns
t_r	Turn-On Rise Time			11		
$t_{d(off)}$	Turn-Off Delay Time			29		
t_f	Turn-Off Fall Time			3		

Notes: Pulse test; pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.

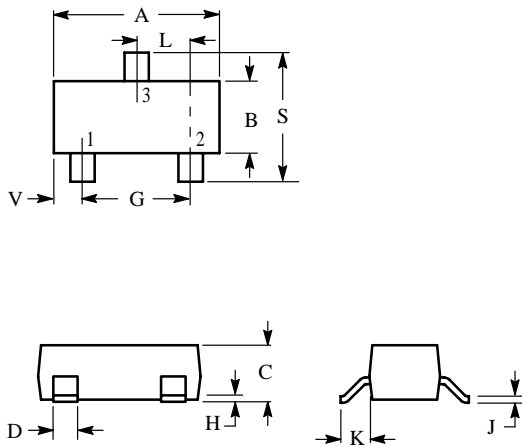
Typical Characteristics (Ta = 25°C Noted)



SOT-23

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

