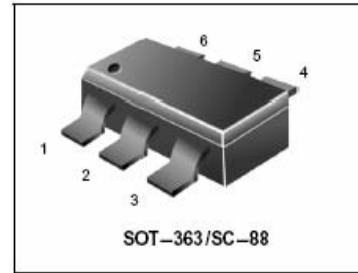
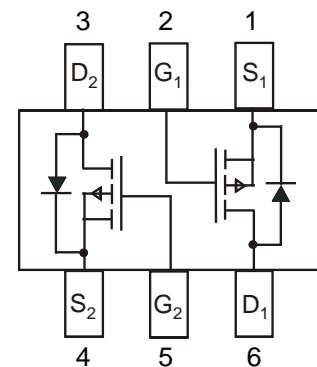


Power MOSFET
130 mAmps, 50 Volts
P-Channel SC-88(SOT-363)



These miniature surface mount MOSFETs reduce power loss conserve energy, making this device ideal for use in small power management circuitry. Typical applications are dc–dc converters, load switching, power management in portable and battery–powered products such as computers, printers, cellular and cordless telephones.

- Energy Efficient
- Miniature SC88 Surface Mount Package Saves Board Space
- Pb-Free Package is available.



MAXIMUM RATINGS ($T_J = 25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Drain–to–Source Voltage	V_{DSS}	50	V_{dc}
Gate–to–Source Voltage – Continuous	V_{GS}	± 20	V_{dc}
Drain Current – Continuous @ $T_A = 25^\circ\text{C}$ – Pulsed Drain Current ($t_p \leq 10 \mu\text{s}$)	I_D I_{DM}	130 520	mA
Total Power Dissipation @ $T_A = 25^\circ\text{C}$	P_D	380	mW
Operating and Storage Temperature Range	T_J, T_{stg}	– 55 to 150	$^\circ\text{C}$
Thermal Resistance – Junction–to–Ambient	$R_{\theta JA}$	328	$^\circ\text{C/W}$
Maximum Lead Temperature for Soldering Purposes, for 10 seconds	T_L	260	$^\circ\text{C}$

ORDERING INFORMATION

Device	Marking	Shipping
FTK84D	PD	3000 Tape & Reel



FTK84D

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Drain-to-Source Breakdown Voltage ($V_{GS} = 0\text{ Vdc}$, $I_D = 250\ \mu\text{Adc}$)	$V_{(BR)DSS}$	50	–	–	Vdc
Zero Gate Voltage Drain Current ($V_{DS} = 25\text{ Vdc}$, $V_{GS} = 0\text{ Vdc}$) ($V_{DS} = 50\text{ Vdc}$, $V_{GS} = 0\text{ Vdc}$) ($V_{DS} = 50\text{ Vdc}$, $V_{GS} = 0\text{ Vdc}$, $T_J = 125^\circ\text{C}$)	I_{DSS}	–	–	0.1 15 60	μAdc
Gate-Body Leakage Current ($V_{GS} = \pm 20\text{ Vdc}$, $V_{DS} = 0\text{ Vdc}$)	I_{GSS}	–	–	± 100	nAdc

ON CHARACTERISTICS (Note 1.)

Gate-Source Threshold Voltage ($V_{DS} = V_{GS}$, $I_D = 250\ \mu\text{Adc}$)	$V_{GS(th)}$	0.8	–	2.0	Vdc
Static Drain-to-Source On-Resistance ($V_{GS} = 5.0\text{ Vdc}$, $I_D = 100\ \text{mAdc}$)	$r_{DS(on)}$	–	5.0	10	Ohms

DYNAMIC CHARACTERISTICS

Input Capacitance	($V_{DS} = 5.0\text{ Vdc}$)	C_{iss}	–	42	–	pF
Output Capacitance	($V_{DS} = 5.0\text{ Vdc}$)	C_{oss}	–	20	–	
Transfer Capacitance	($V_{DG} = 5.0\text{ Vdc}$)	C_{rss}	–	4	–	

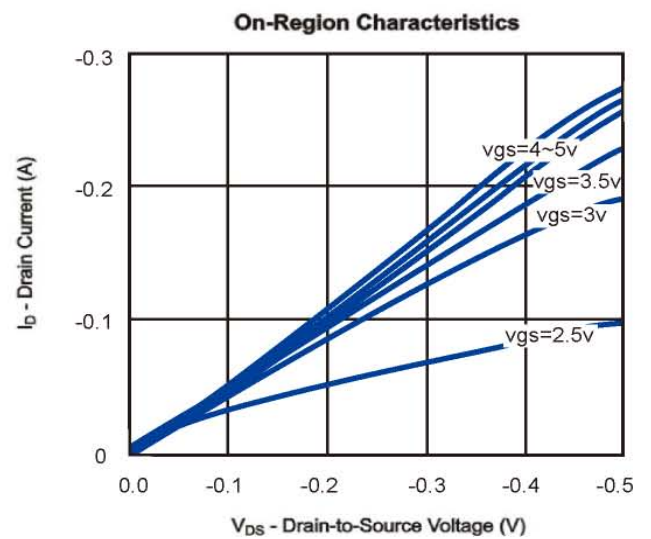
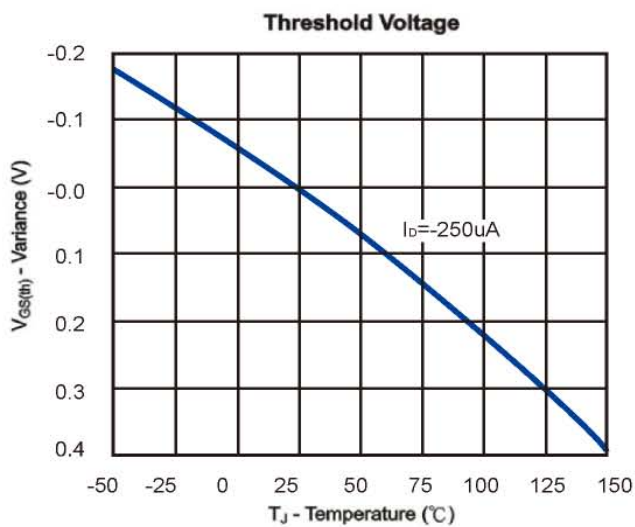
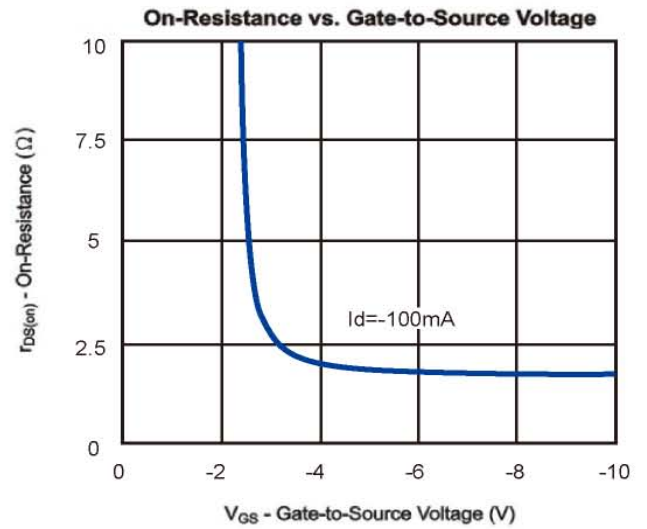
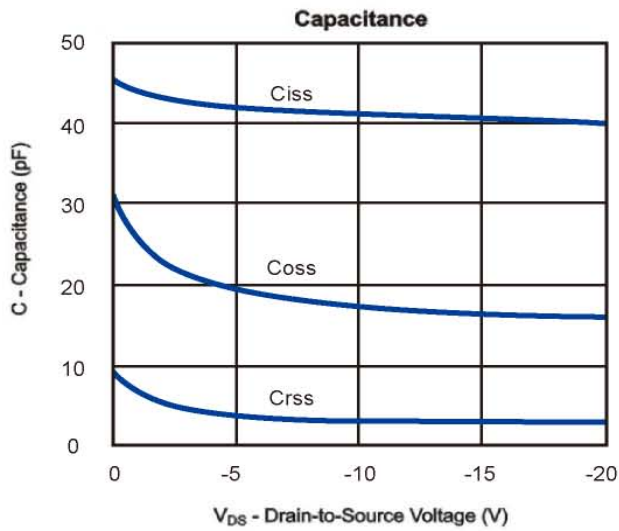
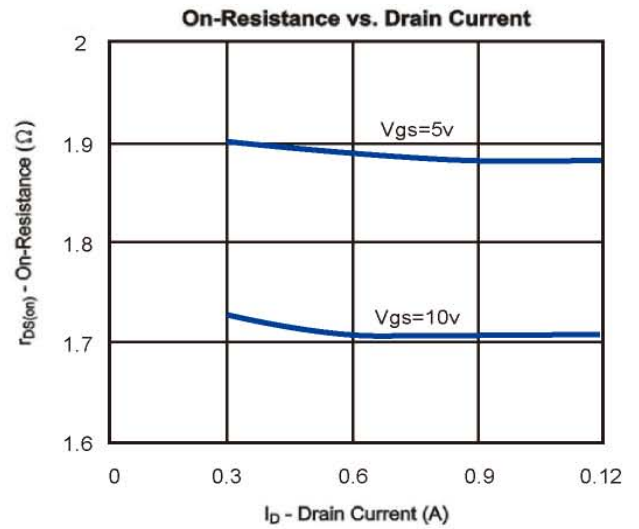
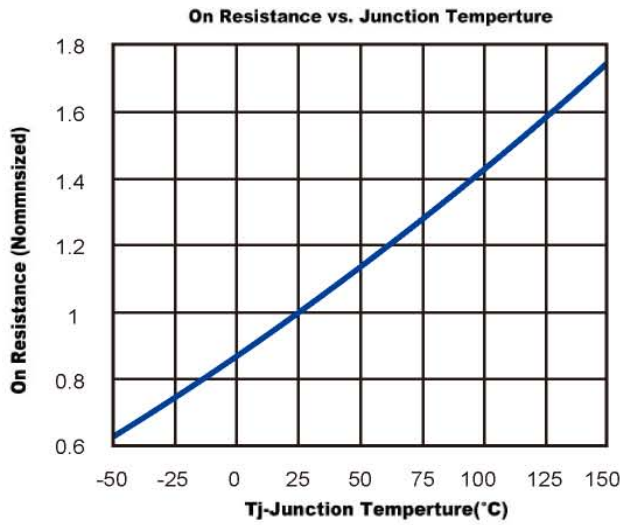
SWITCHING CHARACTERISTICS (Note 2.)

Turn-On Delay Time	(V _{DD} = -15 Vdc, I _D = -2.5 Adc, R _L = 50 Ω)	$t_{d(on)}$	–	13	–	ns
Rise Time		t_r	–	6	–	
Turn-Off Delay Time		$t_{d(off)}$	–	16	–	
Fall Time		t_f	–	3	–	
Gate Charge		Q_T	–	6000	–	pC

1. Pulse Test: Pulse Width $\leq 300\ \mu\text{s}$, Duty Cycle $\leq 2\%$.
2. Switching characteristics are independent of operating junction temperature.

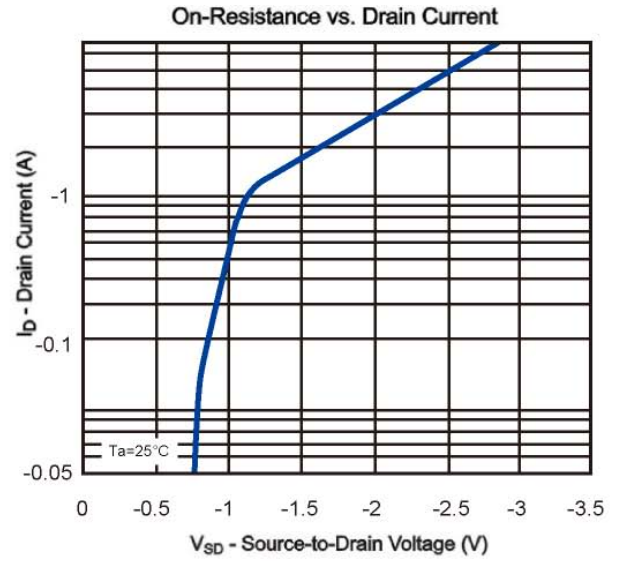
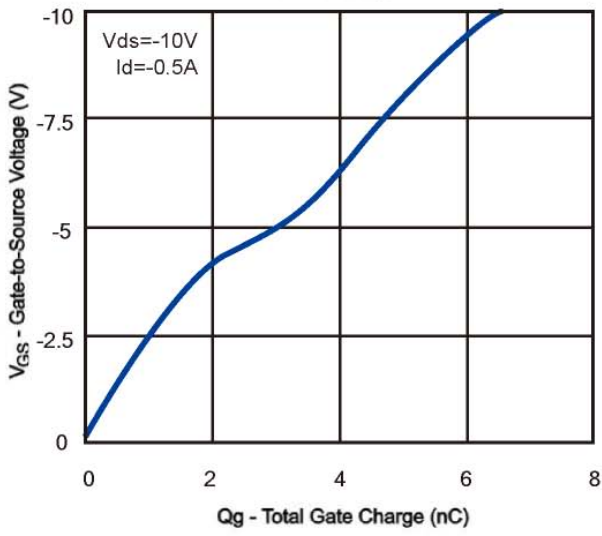


Typical Characteristics (TA =25°C Noted)

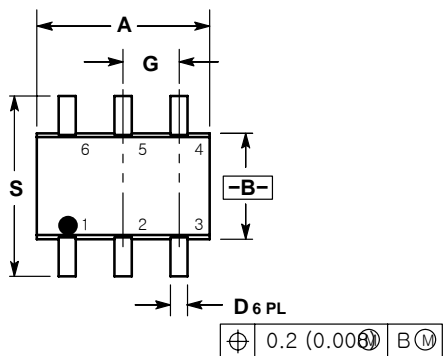




Typical Characteristics (T = 25°C Noted)

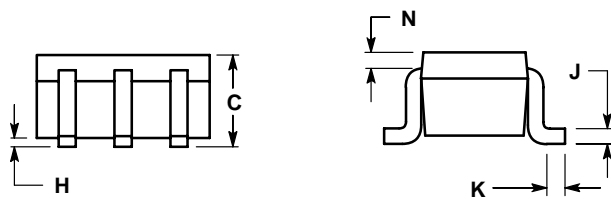


SC-88 (SOT-363) CASE 419B-02 ISSUE T



- NOTES:
1. DIMENSION NG AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.
 3. 419B-01 OBSOLETE, NEW STANDARD 419B-02.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.031	0.043	0.80	1.10
D	0.004	0.012	0.10	0.30
G	0.026 BSC		0.65 BSC	
H	---	0.004	---	0.10
J	0.004	0.010	0.10	0.25
K	0.004	0.012	0.10	0.30
N	0.008 REF		0.20 REF	
S	0.079	0.087	2.00	2.20



- STYLE 1:
- PIN 1. EMITTER 2
 - BASE 2
 - COLLECTOR 1
 - EMITTER 1
 - BASE 1
 - COLLECTOR 2

SOLDERING FOOTPRINT*

