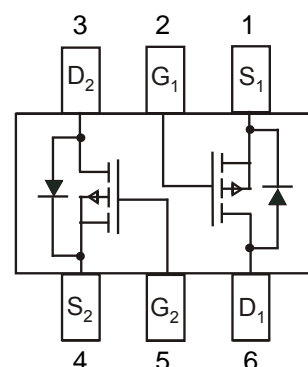
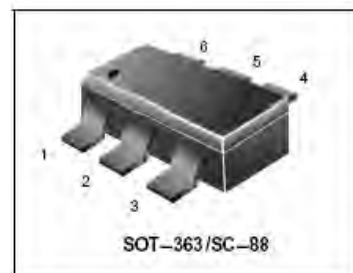


### 130 mAmps, 50 Volts P-Channel SC88

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.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



#### MAXIMUM RATINGS (T<sub>J</sub> = 25°C unless otherwise noted)

Rating	Symbol	Value	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>	-50	V <sub>dc</sub>
Gate-to-Source Voltage – Continuous	V <sub>GS</sub>	± 20	V <sub>dc</sub>
Drain Current			mA
– Continuous @ T <sub>A</sub> = 25°C	I <sub>D</sub>	-130	
– Pulsed Drain Current (t <sub>p</sub> ≤ 10 μs)	I <sub>DM</sub>	-520	
Total Power Dissipation @ T <sub>A</sub> = 25°C	P <sub>D</sub>	380	mW
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	- 55 to 150	°C
Thermal Resistance – Junction-to-Ambient	R <sub>θJA</sub>	328	°C/W
Maximum Lead Temperature for Soldering Purposes, for 10 seconds	T <sub>L</sub>	260	°C

#### ORDERING INFORMATION

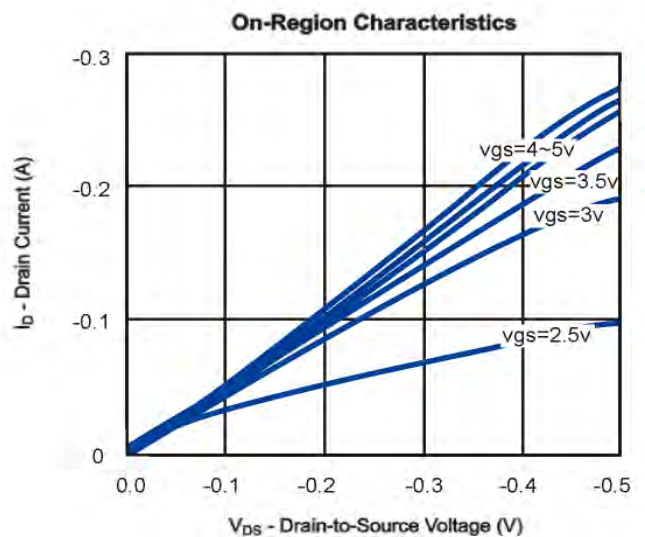
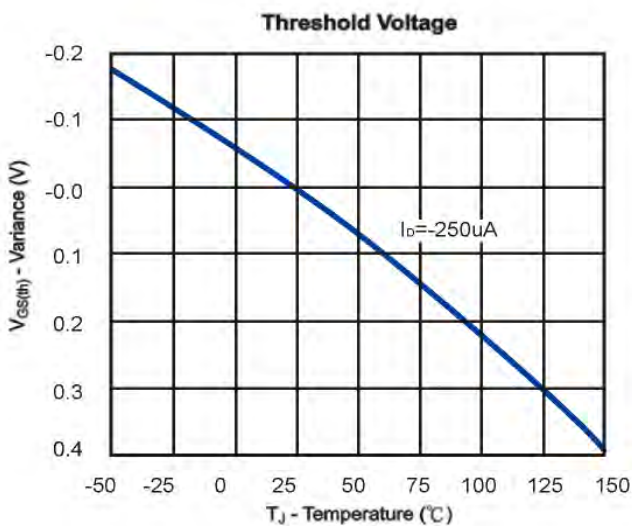
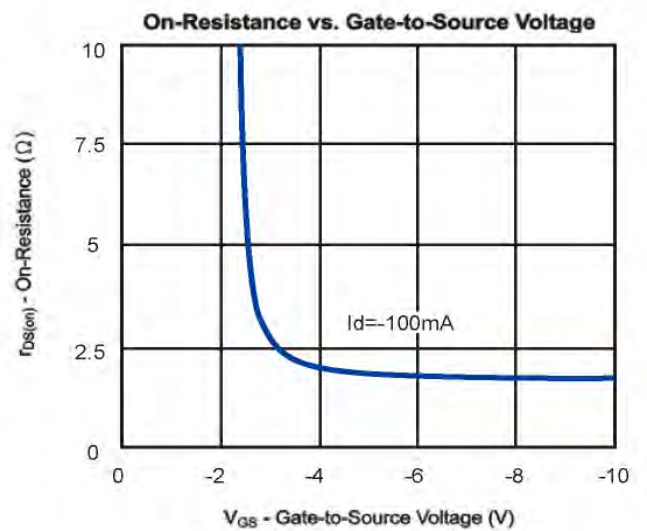
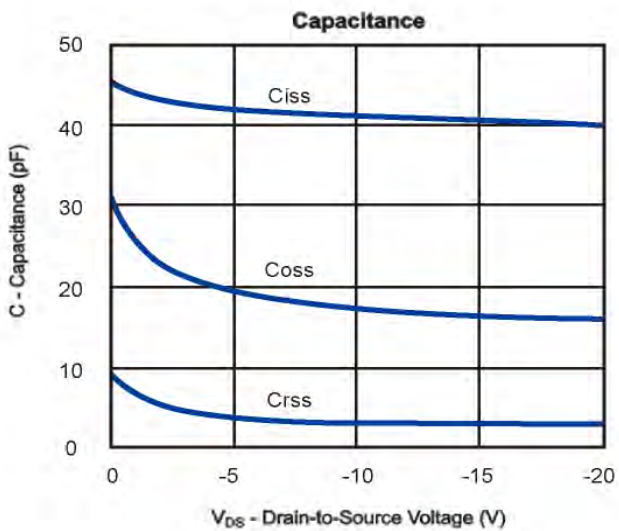
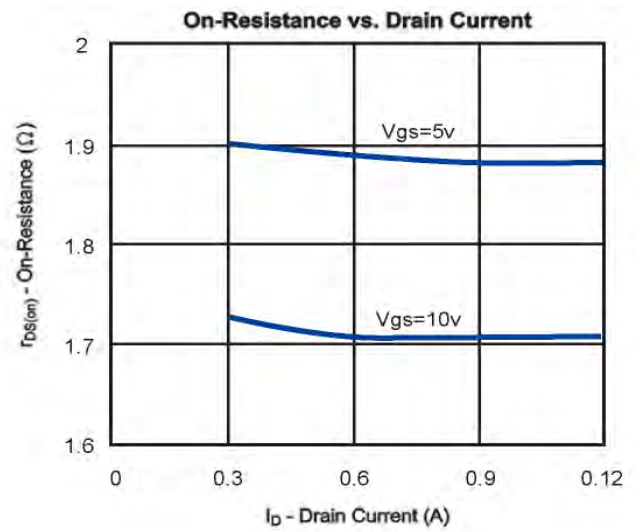
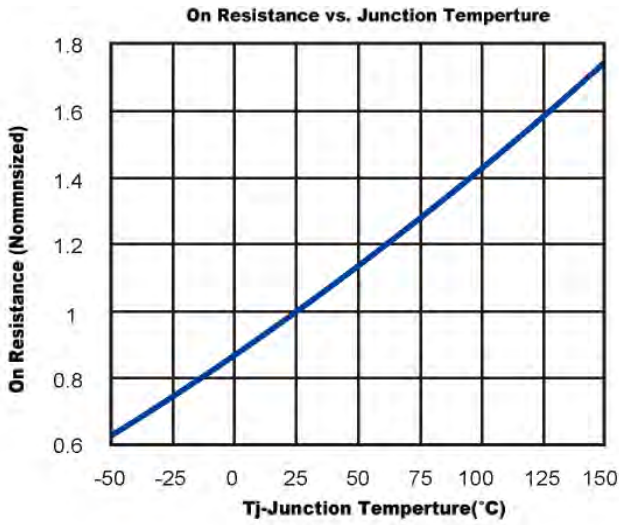
Device	Marking	Shipping
LBSS84DW1T1G	PD	3000 Tape & Reel
S-LBSS84DW1T1G		
LBSS84DW1T1G	PD	10000 Tape & Reel
S-LBSS84DW1T1G		

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
<b>OFF CHARACTERISTICS</b>					
Drain-to-Source Breakdown Voltage (V <sub>GS</sub> = 0 Vdc, I <sub>D</sub> = -250μAdc)	V <sub>(BR)DSS</sub>	-50	-	-	Vdc
Zero Gate Voltage Drain Current (V <sub>DS</sub> = -25 Vdc, V <sub>GS</sub> = 0 Vdc) (V <sub>DS</sub> = -50 Vdc, V <sub>GS</sub> = 0 Vdc) (V <sub>DS</sub> = -50 Vdc, V <sub>GS</sub> = 0 Vdc, T <sub>J</sub> = 125°C)	I <sub>DSS</sub>	-	-	-0.1 -15 -60	μAdc
Gate-Body Leakage Current (V <sub>GS</sub> = ± 20 Vdc, V <sub>DS</sub> = 0 Vdc)	I <sub>GSS</sub>	-	-	±100	nAdc
<b>ON CHARACTERISTICS (Note 1.)</b>					
Gate-Source Threshold Voltage (V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = -250μAdc)	V <sub>GS(th)</sub>	-0.8	-	-2.0	Vdc
Static Drain-to-Source On-Resistance (V <sub>GS</sub> = -5.0 Vdc, I <sub>D</sub> = -100 mAdc) (V <sub>GS</sub> = -10 Vdc, I <sub>D</sub> = -100 mAdc)	r <sub>DS(on)</sub>	-	2 2	6 5	Ohms
<b>DYNAMIC CHARACTERISTICS</b>					
Input Capacitance	(V <sub>DS</sub> = -5.0 Vdc)	C <sub>iss</sub>	-	42	pF
Output Capacitance	(V <sub>DS</sub> = -5.0 Vdc)	C <sub>oss</sub>	-	20	
Transfer Capacitance	(V <sub>DG</sub> = -5.0 Vdc)	C <sub>rss</sub>	-	4	
<b>SWITCHING CHARACTERISTICS (Note 2.)</b>					
Turn-On Delay Time	(V <sub>DS</sub> = -15 V, V <sub>GS</sub> = -10 V R <sub>L</sub> = 50 Ω, R <sub>G</sub> = 25 Ω)	t <sub>d(on)</sub>	-	16.7	ns
Rise Time		t <sub>r</sub>	-	8.6	
Turn-Off Delay Time		t <sub>d(off)</sub>	-	17.9	
Fall Time		t <sub>f</sub>	-	5.3	
Gate Charge		Q <sub>T</sub>	-	6000	pC

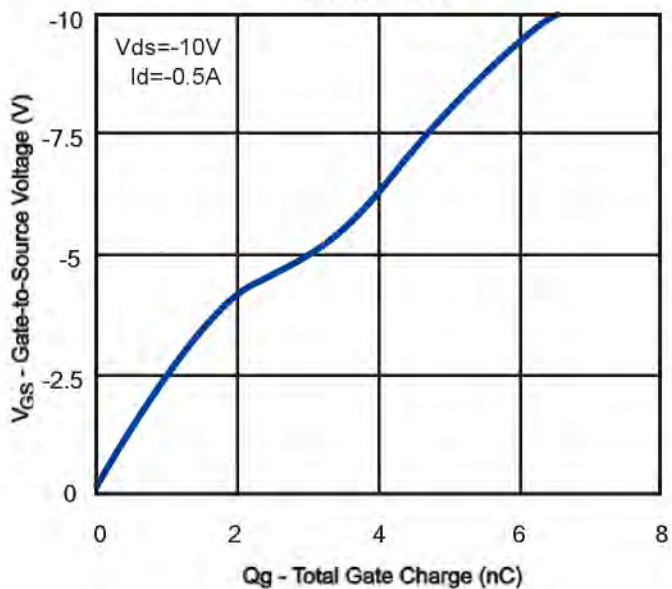
1. Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2%.
2. Switching characteristics are independent of operating junction temperature.

**Typical Characteristics (TA =25°C Noted)**

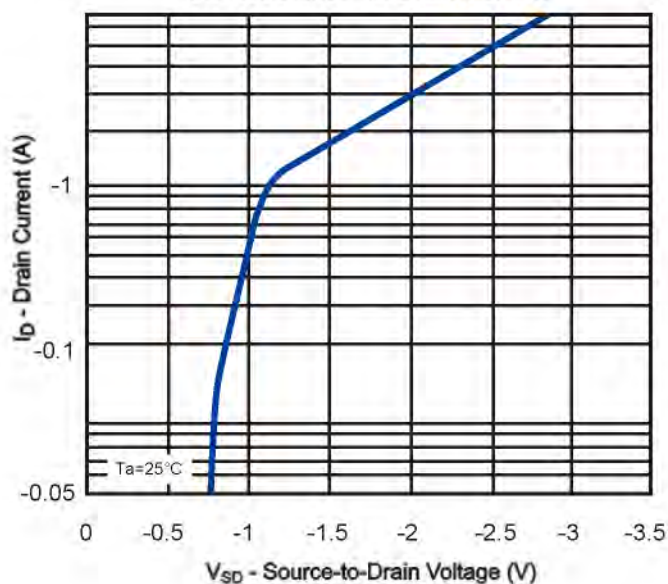


**Typical Characteristics (T = 25°C Noted)**

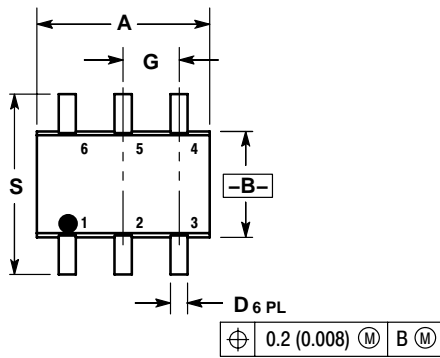
Gate Charge



On-Resistance vs. Drain Current

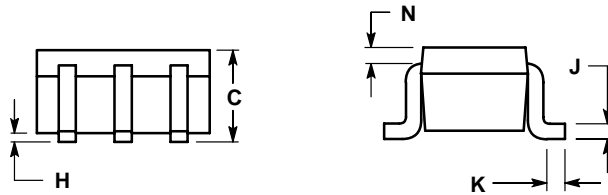


**SC-88 (SOT-363)**



- NOTES:  
 1. DIMENSIONING 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



**SOLDERING FOOTPRINT\***

