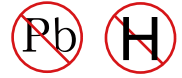
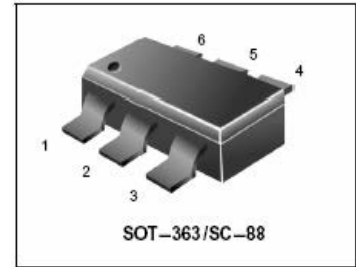


**Dual P-Channel Enhancement MOSFET****VDS= -50V, ID= -130mA**

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.

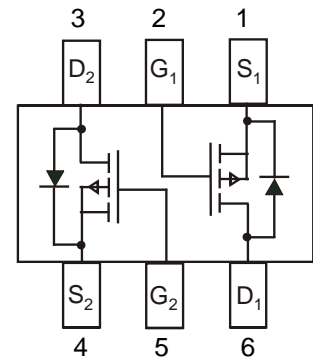
- Energy Efficient
- Miniature SC-88 / SOT-363 Surface Mount Package Saves Board Space

**MARKING**

PD

PACKAGE INFORMATION

Package	Shipping
SOT-363	3000/Tape&Reel

**MAXIMUM RATINGS (T_J = 25°C unless otherwise noted)**

RATING	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V _{DSS}	-50	V
Gate to Source Voltage - Continuous	V _{GS}	±20	V
Continuous Drain Current @ T _A = 25°C	I _D	-130	mA
Pulsed Drain Current (tp ≤ 10 us)	I _{DM}	-520	mA
Total Power Dissipation @ T _A = 25°C	P _D	225	mW
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to 150	°C
Thermal Resistance Junction to Ambient	R _{θJA}	556	°C/W
Maximum Lead Temperature for Soldering Purposes, for 10 seconds	T _L	260	°C

ELECTRICAL CHARACTERISTICS

BSS84DW

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	-	-	V
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	μA
Gate-Body Leakage Current ($V_{GS} = \pm 20 \text{ Vdc}$, $V_{DS} = 0 \text{ Vdc}$)	I_{GSS}	-	-	± 100	nA

ON CHARACTERISTICS (Note 1.)

Gate-Source Threshold Voltage ($V_{DS} = V_{GS}$, $I_D = -1.0 \text{ mAdc}$)	$V_{GS(th)}$	-0.8	-	-2.0	V
Static Drain-to-Source On-Resistance ($V_{GS} = -5.0 \text{ Vdc}$, $I_D = -100 \text{ mAdc}$)	$R_{DS(on)}$	-	5.0	10	

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.)

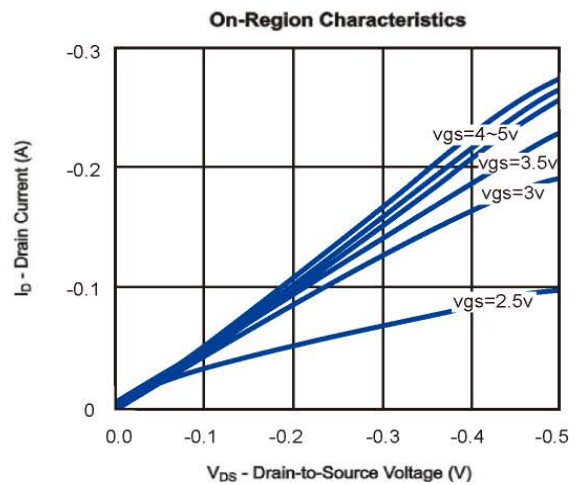
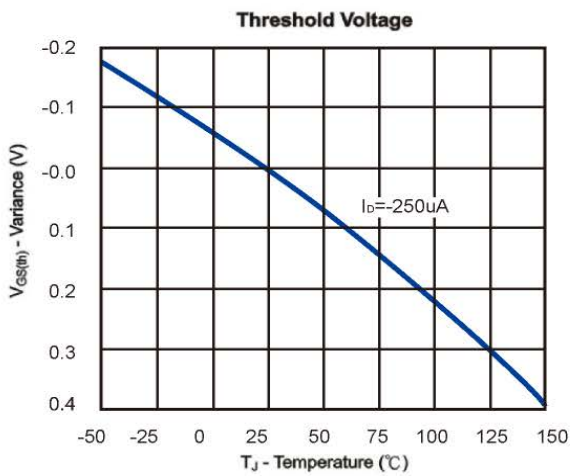
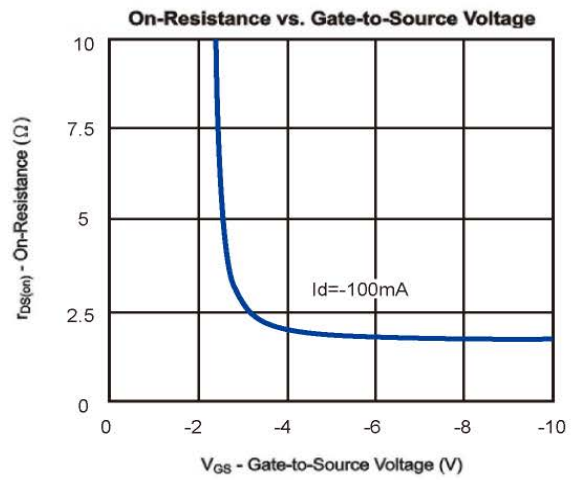
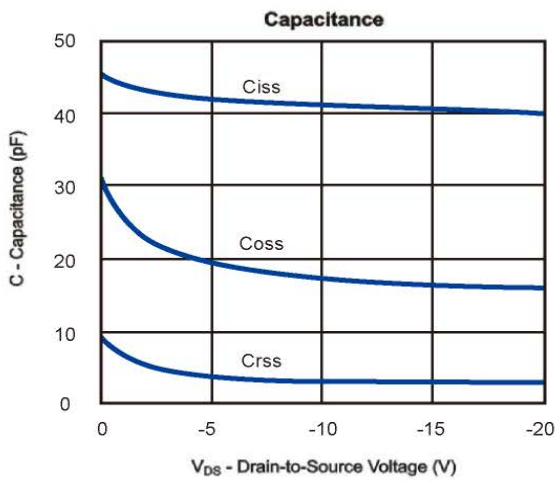
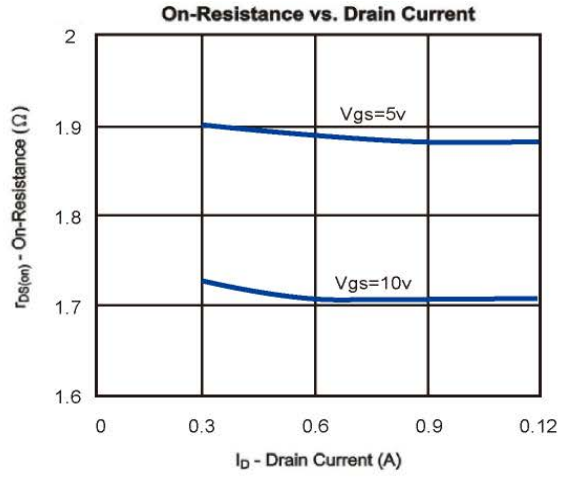
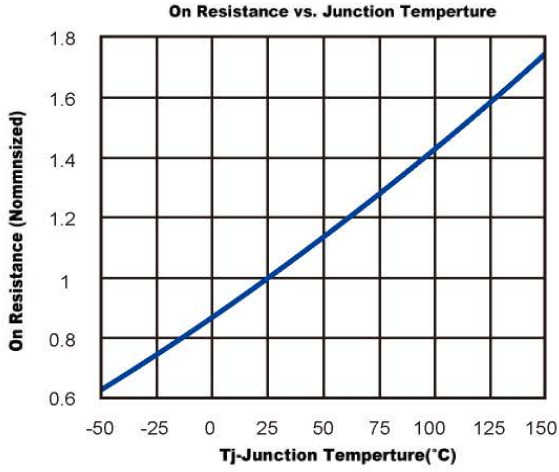
Turn-On Delay Time	$(V_{DD} = -15 \text{ Vdc}$, $I_D = -2.5 \text{ Adc}$, $R_L = 50 \Omega$)	$t_{d(on)}$	-	13	-	ns
Rise Time		t_r	-	6	-	
Turn-Off Delay Time		$t_{d(off)}$	-	16	-	
Fall Time		t_f	-	3	-	
Gate Charge		Q_T	-	6000	-	pC

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

DEVICE CHARACTERISTICS

BSS84DW

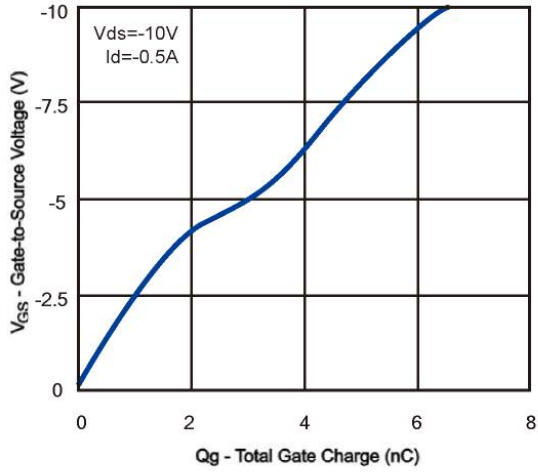
Typical Characteristics (TA = 25°C Noted)



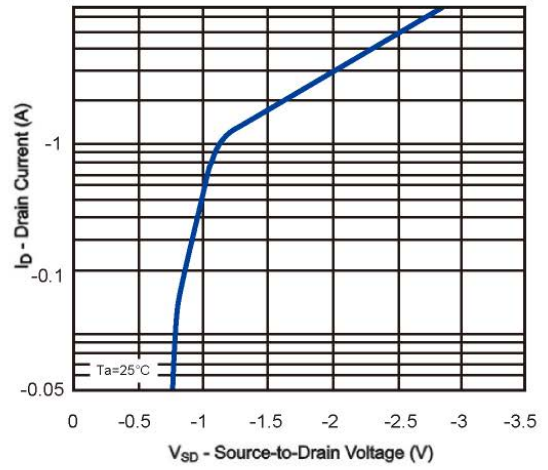
DEVICE CHARACTERISTICS

BSS84DW

Typical Characteristics (T = 25°C Noted)
Gate Charge



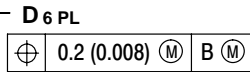
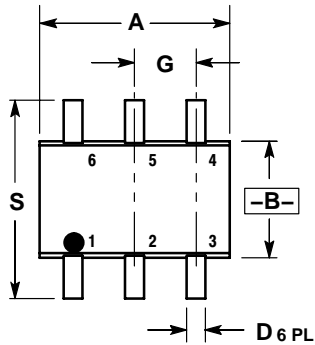
On-Resistance vs. Drain Current



PACKAGE OUTLINE & DIMENSIONS

BSS84DW

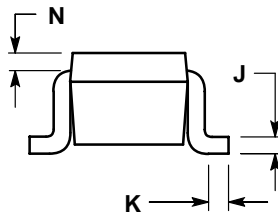
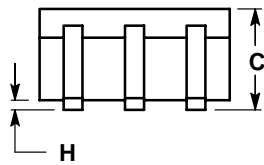
SC-88 (SOT-363)



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



STYLE 1:

- PIN 1. EMITTER 2
- 2. BASE 2
- 3. COLLECTOR 1
- 4. EMITTER 1
- 5. BASE 1
- 6. COLLECTOR 2

SOLDERING FOOTPRINT*

