

### Features

- Low on-resistance
- High-speed switching
- Drive circuits can be simple
- Parallel use is easy

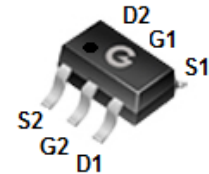
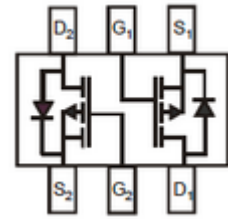
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### Typical Applications

- P-channel enhancement mode effect transistor
- Switching application

### Mechanical Data

- Case: SOT-363
- Molding Compound, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Plated Leads, Solderable Per MIL-STD-202, Method 208



BSS84DW

SOT-363

### Ordering Information

Part Number	Package	Shipping	Marking Code
BSS84DW	SOT-363	3000pcs / Tape & Reel	K84

### Maximum Ratings (@T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Units
Drain-Source Voltage	V <sub>DSS</sub>	-50	V
Gate -Source Voltage	V <sub>GSS</sub>	±12	V
Continuous Drain Current <sup>(NOTE1)</sup>	I <sub>D</sub>	-130	mA
Power Dissipation <sup>(NOTE1)</sup>	P <sub>D</sub>	0.3	W

### Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	417	°C/W
Operating Junction Temperature Range	T <sub>j</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

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

Symbol	Parameter	Test conditions	MIN	TYP	MAX	UNIT
<b>OFF Characteristics</b>						
$V_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=-250\mu A$	-50	-	-	V
$I_{DSS}$	Drain to Source Leakage Current	$V_{DS}=-50V, V_{GS}=0V$	-	-	-1	$\mu A$
$I_{GSS}$	Gate-body Leakage	$V_{GS}=\pm 12V, V_{DS}=0V$	-	-	$\pm 10$	nA
<b>ON Characteristics</b> <sup>(NOTE2)</sup>						
$R_{DS(ON)}$	Static Drain-Source On-resistance	$V_{GS}=-5V, I_D=-0.1A$	-	2.1	10	$\Omega$
$V_{GS(TH)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=-1mA$	-0.8	-1.6	-2	V
<b>Dynamic Characteristics</b> <sup>(NOTE3)</sup>						
$C_{iss}$	Input Capacitance	$V_{GS}=0V$	-	56	-	pF
$C_{oss}$	Output Capacitance	$V_{DS}=-20V$	-	17	-	
$C_{rss}$	Reverse Transfer Capacitance	$f=1.0MHz$	-	5	-	
<b>Switching Characteristics</b> <sup>(NOTE3)</sup>						
$t_{d(on)}$	Turn-on Delay Time	$V_{DD}=-30V, I_D=0.2A$	-	6	-	nS
$t_{d(off)}$	Turn-Off Delay Time	$V_{GS}=-10V, R_G=25\Omega$ $R_L=150\Omega$	-	25	-	

NOTE:

- 1、 Surface Mounted on FR4 Board,  $t \leq 10$  sec
- 2、 Pulse Test: Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2\%$ .
- 3、 Guaranteed by design, not subject to production.

Ratings and Characteristic Curves ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG 1.OUTPUT CHARACTERISTICS

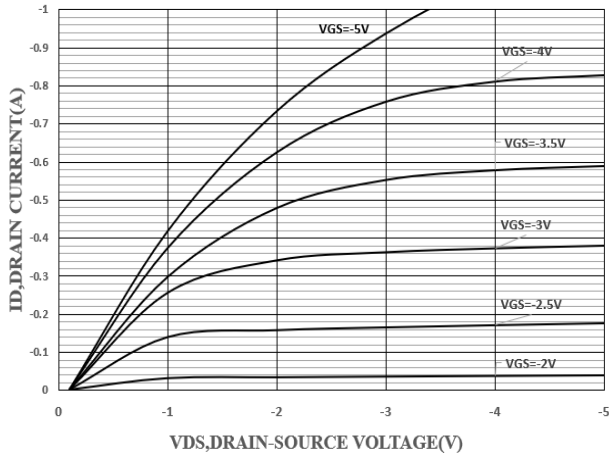


FIG 2.DRAIN-SOURCE ON RESISTANCE

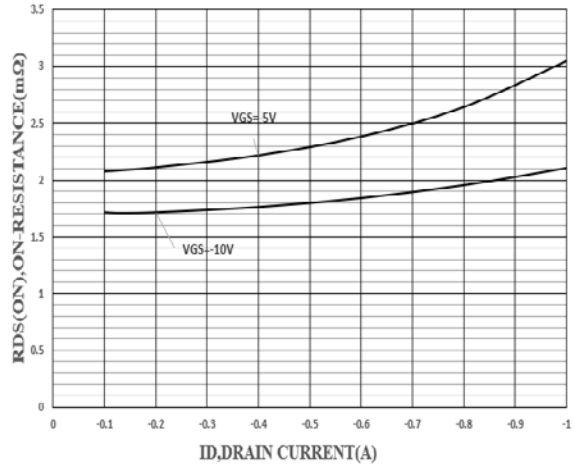


FIG 3.DRAIN-SOURCE ON RESISTANCE

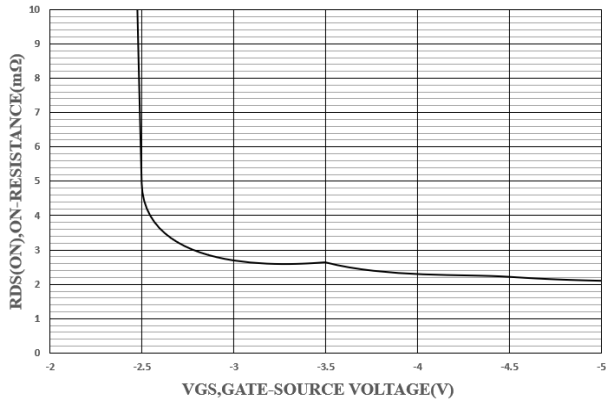


FIG 4.GATE THRESHOLD VOLTAGE

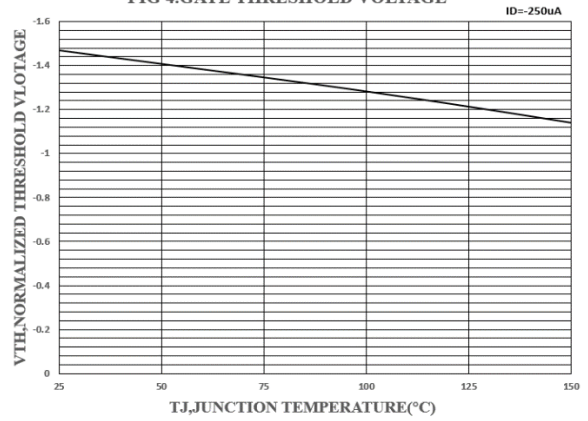


FIG 5.DRAIN-SOURCE ON RESISTANCE

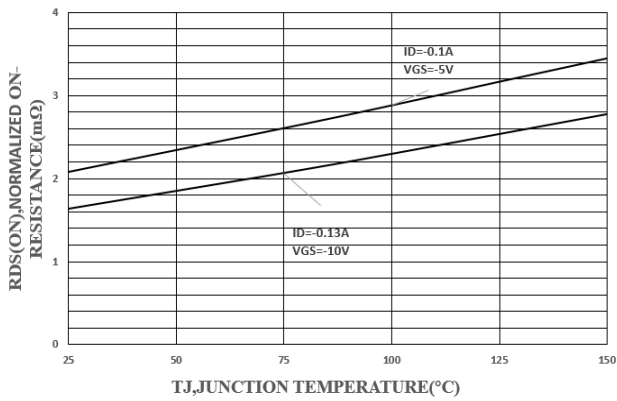
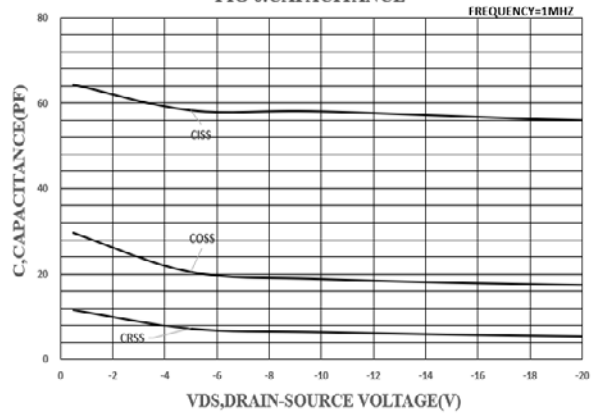
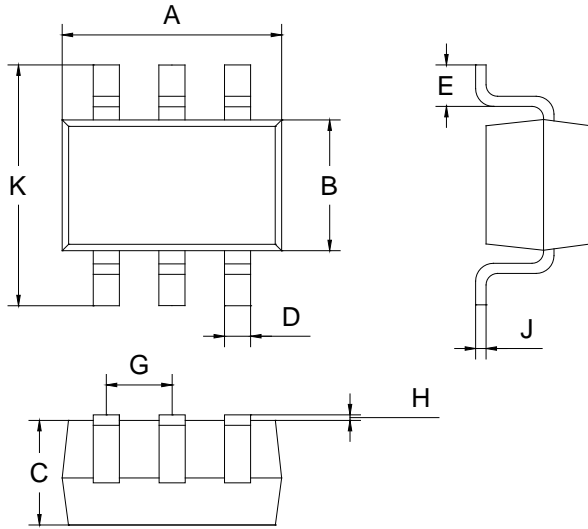


FIG 6.CAPACITANCE



Package Outline Dimensions(unit:mm)

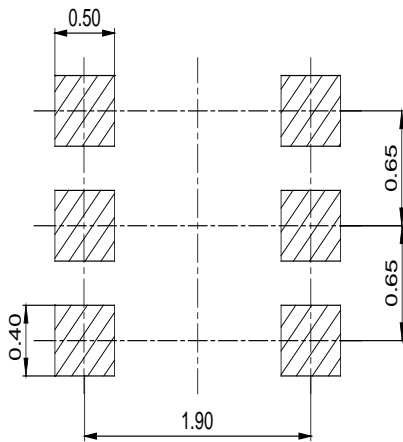
SOT-363



SOT-363		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.85	1.05
D	0.15	0.35
E	0.25	0.40
G	0.60	0.70
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Mounting Pad Layout(unit:mm)

SOT-363



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