



# BSS84DW

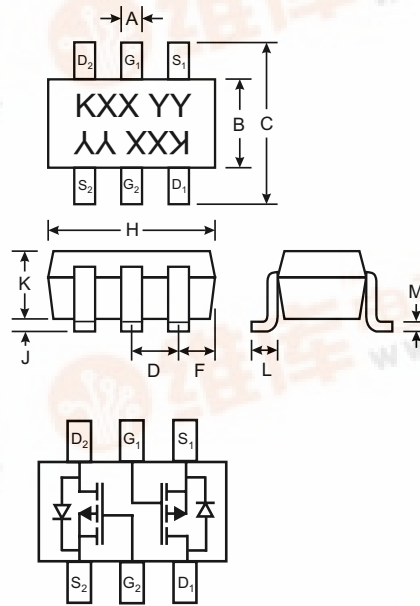
## DUAL P-CHANNEL ENHANCEMENT MODE FIELD EFFECT TRANSISTOR

### Features

- Low On-Resistance
- Low Gate Threshold Voltage
- Low Input Capacitance
- Fast Switching Speed

### Mechanical Data

- Case: SOT-363, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Marking: KXX: Product marking code  
YY: Date code
- Marking Code: K84
- Weight: 0.006 grams (approx.)



SOT-363		
Dim	Min	Max
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
F	0.30	0.40
H	1.80	2.20
J	—	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.25
All Dimensions in mm		

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

Characteristic	Symbol	BSS84DW	Units
Drain-Source Voltage	V <sub>DSS</sub>	-50	V
Drain-Gate Voltage (Note 3)	V <sub>DGR</sub>	-50	V
Gate-Source Voltage	V <sub>GSS</sub>	±20	V
Drain Current (Note 1)	I <sub>D</sub>	-130	mA
Total Power Dissipation (Note 1)	P <sub>d</sub>	200	mW
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	625	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

- Note: 1. Valid provided that terminals are kept at specified ambient temperature.  
 2. Pulse width ≤ 300μs, duty cycle ≤ 2%.  
 3. R<sub>GS</sub> ≤ 20KΩ.



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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
<b>OFF CHARACTERISTICS (Note 2)</b>						
Drain-Source Breakdown Voltage	$BV_{DSS}$	-50	-75	—	V	$V_{GS} = 0V, I_D = -250\mu A$
Zero Gate Voltage Drain Current	$I_{DSS}$	—	—	-15	$\mu A$	$V_{DS} = -50V, V_{GS} = 0V, T_J = 25^\circ C$
		—	—	-60	$\mu A$	$V_{DS} = -50V, V_{GS} = 0V, T_J = 125^\circ C$
		—	—	-100	nA	$V_{DS} = -25V, V_{GS} = 0V, T_J = 25^\circ C$
Gate-Body Leakage	$I_{GSS}$	—	—	$\pm 10$	nA	$V_{GS} = \pm 20V, V_{DS} = 0V$
<b>ON CHARACTERISTICS (Note 2)</b>						
Gate Threshold Voltage	$V_{GS(th)}$	-0.8	-1.6	-2.0	V	$V_{DS} = V_{GS}, I_D = -1mA$
Static Drain-Source On-Resistance	$R_{DS(ON)}$	—	6	10	$\Omega$	$V_{GS} = -5V, I_D = 0.100A$
Forward Transconductance	$g_{FS}$	.05	—	—	S	$V_{DS} = -25V, I_D = 0.1A$
<b>DYNAMIC CHARACTERISTICS</b>						
Input Capacitance	$C_{iss}$	—	—	45	pF	$V_{DS} = -25V, V_{GS} = 0V$ $f = 1.0MHz$
Output Capacitance	$C_{oss}$	—	—	25	pF	
Reverse Transfer Capacitance	$C_{rss}$	—	—	12	pF	
<b>SWITCHING CHARACTERISTICS</b>						
Turn-On Delay Time	$t_{D(ON)}$	—	10	—	ns	$V_{DD} = -30V, I_D = -0.27A,$ $R_{GEN} = 50\Omega, V_{GS} = -10V$
Turn-Off Delay Time	$t_{D(OFF)}$	—	18	—	ns	

- Note: 1. Valid provided that terminals are kept at specified ambient temperature.  
 2. Pulse width  $\leq 300\mu s$ , duty cycle  $\leq 2\%$ .  
 3.  $R_{GS} \leq 20K\Omega$ .