DESCRIPTION

The BSS84DW is available in the SOT-363 packages.

BVDSS	RDSON	ID
-60V	6Ω	-0.18A

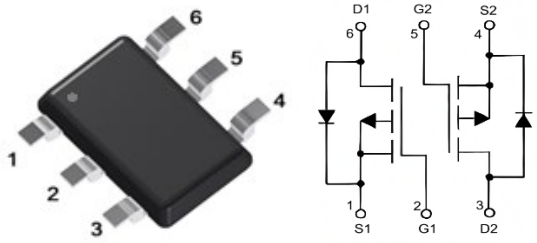
FEATURE

- Trench Power LV MOSFET Technology
- Low $R_{DS(ON)}$
- Low Gate Charge

APPLICATIONS

- Video monitor
- Power management
- Load Switch

PIN DESCRIPTION



ORDERING INFORMATION

Package Type	Part Number
SOT-363	BSS84DW
SPQ	3,000pcs/Reel
AiT provides all RoHS products	

Pin #	Symbol	Function
1,4	S	Source
2,5	G	Gate
3,6	D	Drain

ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise specified.

V_{DSS}, Drain-Source Voltage	-60 V
V_{GSS}, Gate-Source Voltage	±20 V
I_D, Continue Drain Current	-0.18 A
I_{DM} (1), Pulsed Drain Current	-0.45 A
I_S, Diode Continuous Forward Current	-0.1 A
T_J, Maximum Junction Temperature	150 ℃
T_{STG}, Storage Temperature Range	50 ~ 150 ℃
$R_{\theta JA}$ (2), Thermal Resistance-Junction to Ambient	400 ℃/W

(1) Current limit by max. junction temperature.

(2) The $R_{\theta JA}$ is the sum of the thermal impedance from junction to ambient and depend on package type.

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_C = 25°C, unless otherwise specified.

Parameter	Symbol	Condition	Min	Typ.	Max	Unit
Static Characteristics (3)						
Drain-Source Breakdown Voltage	B_{VDSS}	V_{GS}= 0 V, I_{DS} = -250 μA	-60	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = -48 V, V_{GS} = 0 V	-	-	1	μA
		T_J = 85 ℃	-	-	30	
Gate Threshold Voltage	$V_{GS(TH)}$	V_{DS} = V_{GS}, I_D = -250 μA	-1.1	-1.8	-2.5	V
Gate Leakage Current	I_{GSS}	V_{GS} = ±20 V, V_{DS} = 0 V	-	-	±10	μA
Drain-Source On-State Resistance	$R_{DS(ON)}$	V_{GS} = -10V, I_{DS} = -100 mA	-	4.0	6.0	Ω
		V_{GS} = -4.5V, I_{DS} = -100 mA	-	4.5	7.0	
Drain Forward Voltage	V_{SD}	V_{GS} = 0V , I_{SD} = -100 mA	-	-0.85	-1.1	V

(3) MOS static characteristics test by wafer level (CP).

TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. Output Characteristics

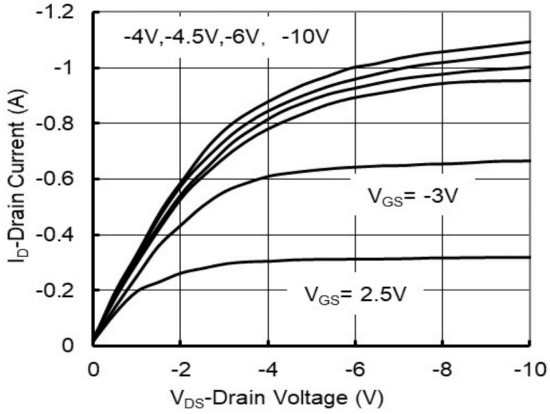


Fig 2. Transfer Characteristics

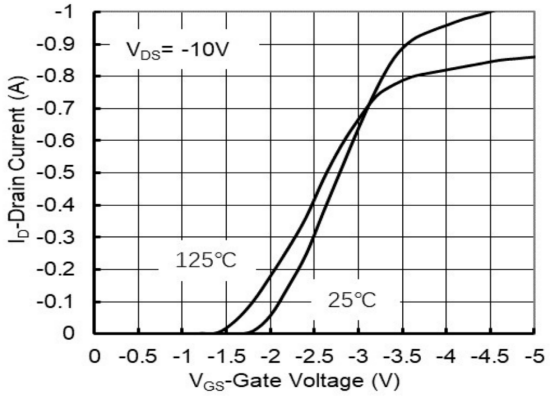


Fig3. Drain-Source on Resistance

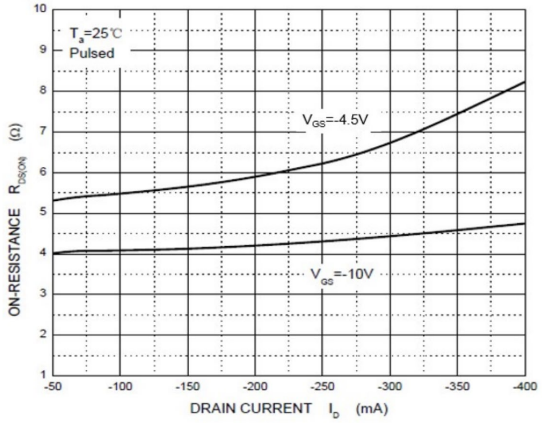


Fig4. Drain-Source on Resistance

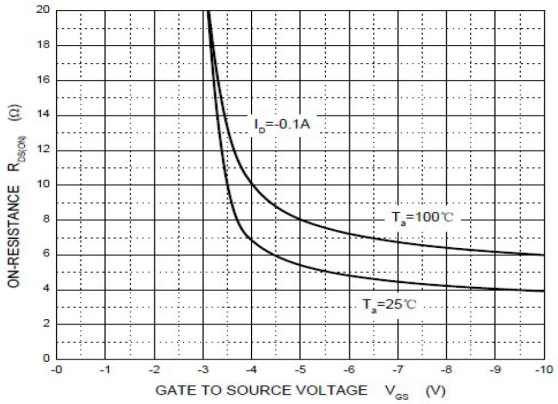


Fig5. Diode Forward Voltage vs. current

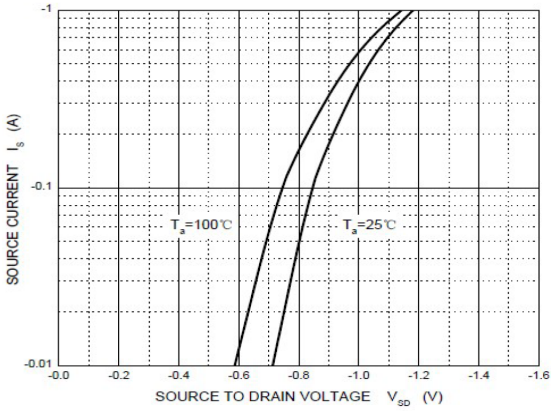
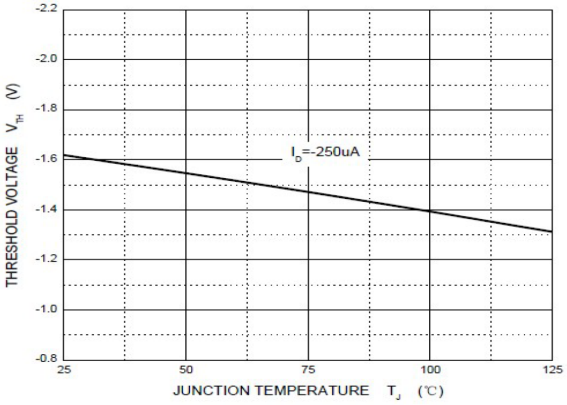
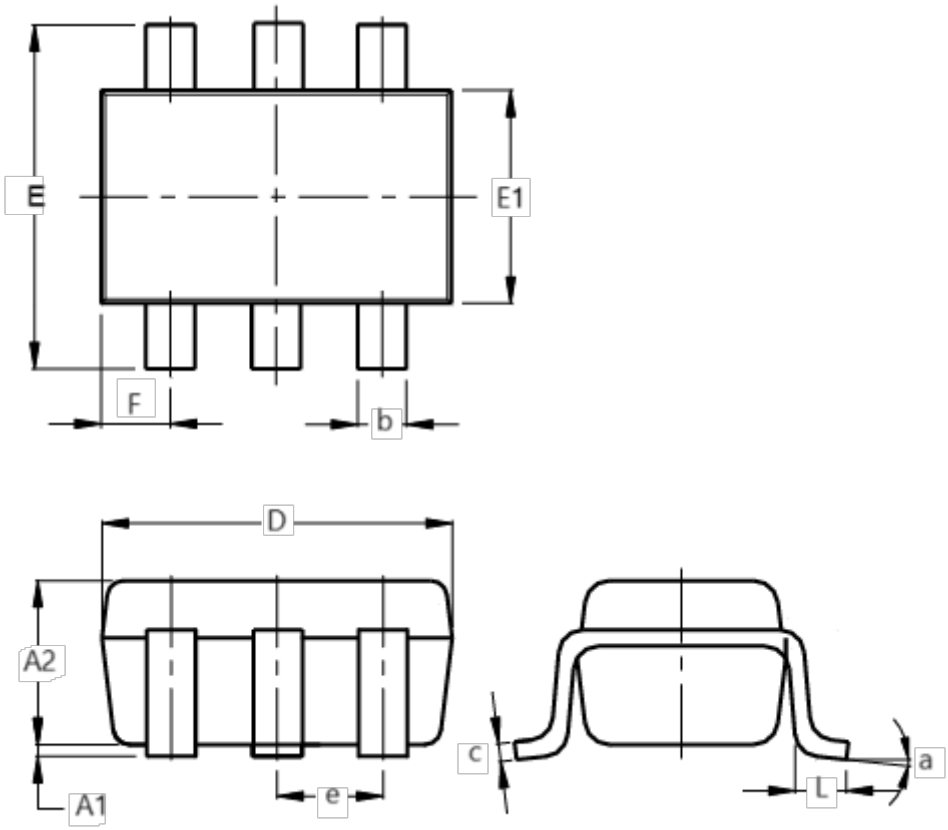


Fig6. Gate Threshold vs. Junction Temperature



PACKAGE INFORMATION

Dimension in SOT-363 (Unit: mm)



Symbol	Millimeter	
	Min.	Max.
A1	0.000	0.100
A2	0.800	1.000
b	0.100	0.350
c	0.080	0.220
D	1.800	2.220
E	2.000	2.450
E1	1.150	1.350
e	0.650 TYP.	
F	0.250	0.450
L	0.250	0.460
a	0°	8°

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