DESCRIPTION

The BSS84W is available in SOT-323 packages.

BVDSS	RDSON	ID
-60V	4Ω	-0.18A

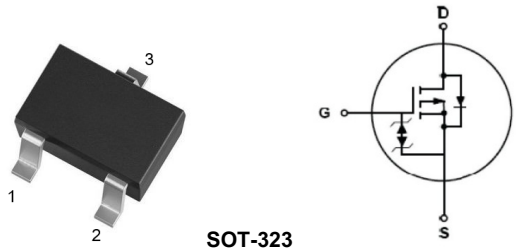
FEATURE

- Low On -Resistance
- Low Gate threshold voltage
- Low input Capacitance
- Reliable and Rugged
- ESD Protected

APPLICATION

- General purpose interfacing switch
- Analog load switch
- Power management functions

PIN DESCRIPTION



SOT-323

Pin #	Symbol	Function
1	G	Gate
2	S	Source
3	D	Drain

ORDERING INFORMATION

Package Type	Part Number
SOT-323	BSS84W
SPQ	3,000pcs/Reel
AiT provides all RoHS products	

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

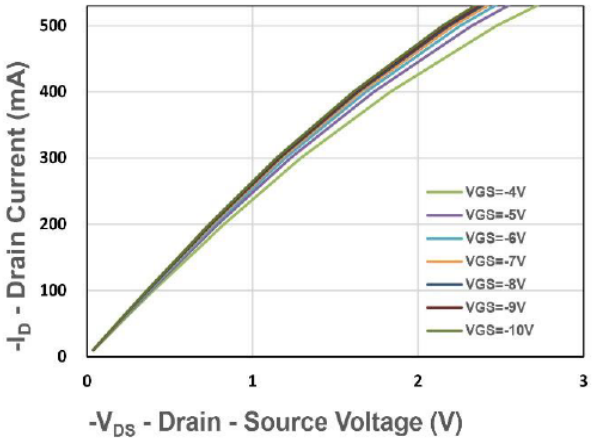


Fig 2. On-Resistance vs. ID

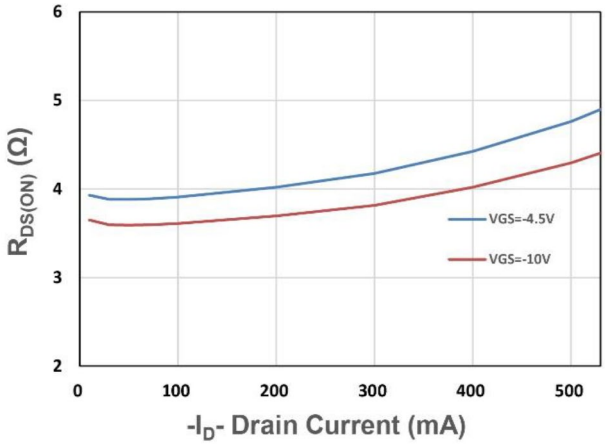


Fig 3. On-Resistance vs. VGS

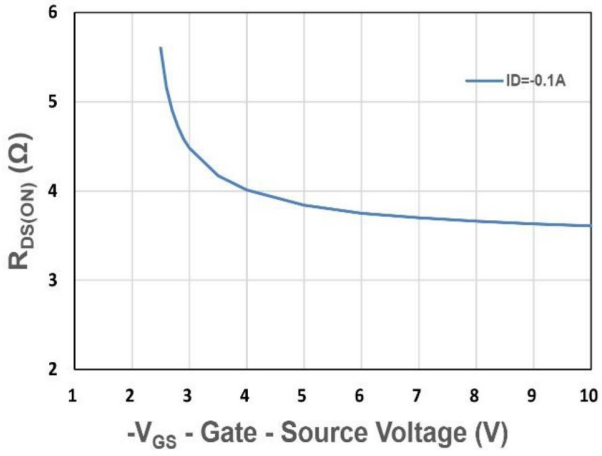


Fig 4. Gate Threshold Voltage

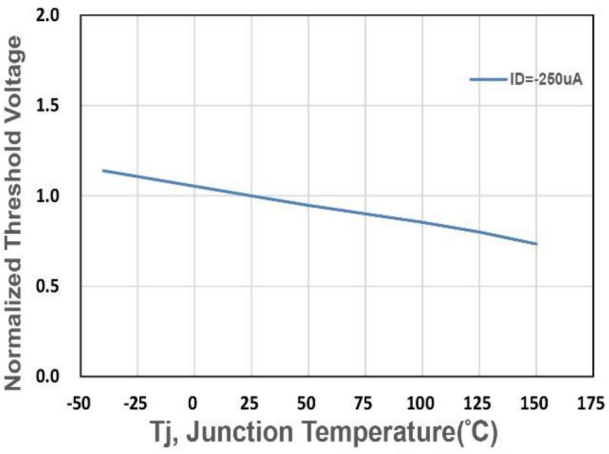


Fig 5. Drain-Source on Resistance

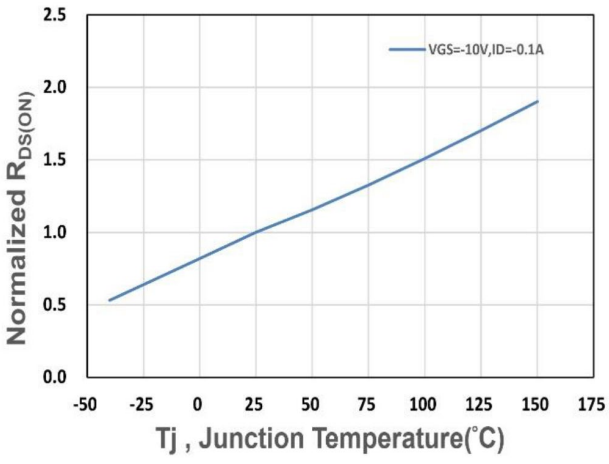


Fig 6. Source-Drain Diode Forward

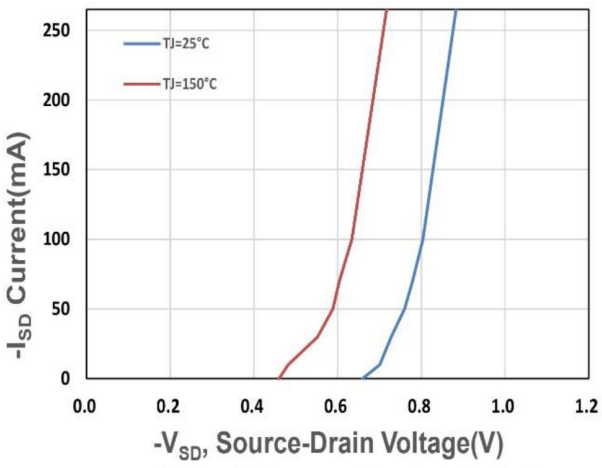


Fig 7. Capacitance

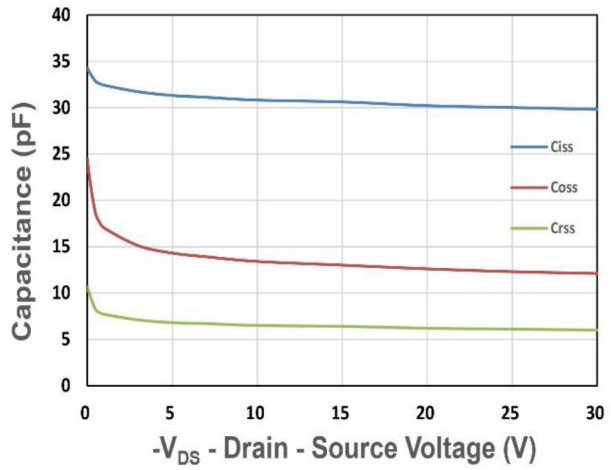


Fig 8. Gate Charge Characteristics

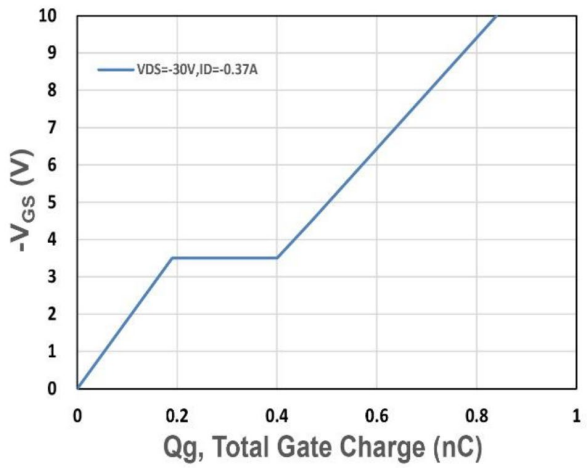


Fig 9. Power Dissipation

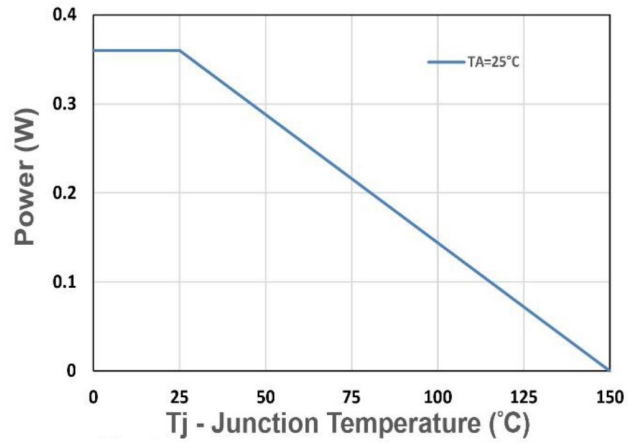


Fig 10. Drain Current

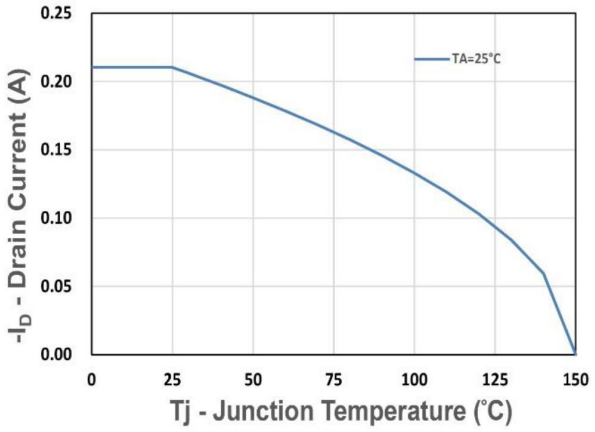


Fig 11. Sate Operating Area

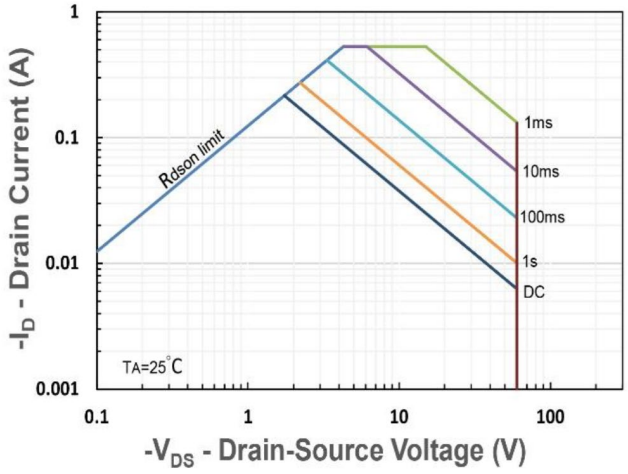
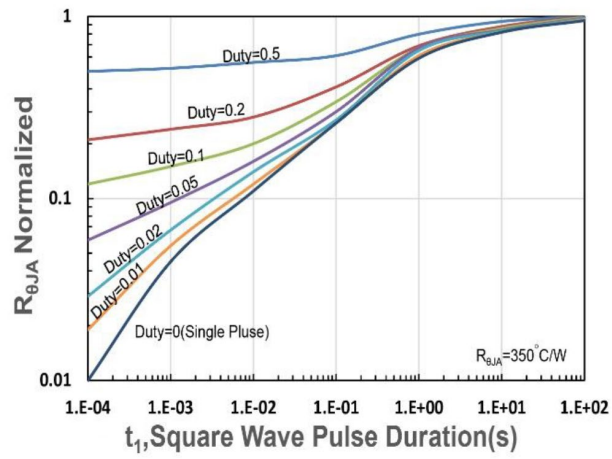
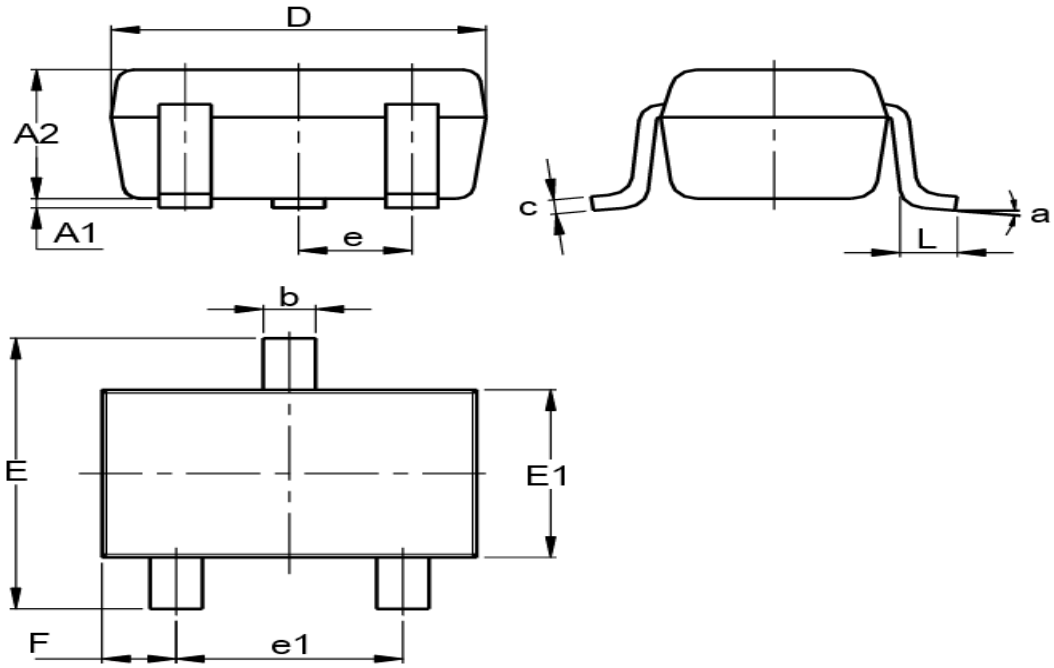


Fig 12. $R_{\theta JA}$ Transient Thermal Impedance



PACKAGE INFORMATION

Dimension in SOT-323 (Unit: mm)



Symbol	Millimeter	
	Min.	Max.
A1	0.000	0.100
A2	0.800	1.000
b	0.200	0.400
c	0.080	0.180
D	1.000	2.220
E	2.000	2.450
E1	1.150	1.350
e	0.650 TYP.	
e1	1.200	1.400
F	0.250	0.475
L	0.250	0.460
a	0°	8°

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