

Description

These miniature surface mount MOSFETs reduce power loss conserve energy, making this device ideal for use in small power management circuitry.

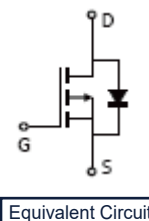
General Features

- Energy Efficient
- Low Threshold Voltage
- High-speed Switching
- Miniature Surface Mount Package Saves Board Space

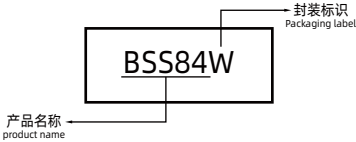


Applications

- DC-DC converters, load switching, power management in portable and battery-powered products such as computers, printers, cellular and cordless telephones.



Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
BSS84W	SOT-323		K84	3000

Absolute Maximum Ratings (TA=25℃ unless otherwise noted)

Symbol	Parameter	Rating	Units
V _{DSS}	Drain-Source voltage	-50	V
V _{GSS}	Gate-Source Voltage	±20	V
I _D	Drain Current-Continuous	-0.13	A
I _{DM}	Pulsed Drain Current ¹ @tp <10 μs	-0.52	A
P _D	Power Dissipation	225	mW
R _{θJA}	Thermal Resistance from Junction to Ambient	556	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C
T _L	Maximum Lead Temperature for Soldering Purposes , Duration for 5 Seconds	260	°C

Electrical Characteristics (T_A=25℃, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
STATIC CHARACTERISTICS						
V _{(BR) DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =-250μA	-50	---	---	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-50V,V _{GS} = 0V	---	---	-15	μA
		V _{DS} =-25V,V _{GS} = 0V	---	---	-0.1	
I _{GSS}	Gate -Source leakage current	V _{GS} =±20V, V _{DS} =0V	---	---	±5	μA
V _{GS(th)}	GateThreshold Voltage ³	V _{DS} =V _{GS} , I _D =-250μA	-0.9	---	-2	V
R _{DS(on)}	Drain-Source On-Resistance ³	V _{GS} =-5V, I _D =-0.1A	---	---	10	Ω
		V _{GS} =-10V, I _D =-0.1A	---	---	8	
g _{fs}	Forward Transconductance ¹	V _{DS} =-25V, I _D =-100mA	50	---	---	mS
DYNAMIC CHARACTERISTICS ⁴						
C _{iss}	Input Capacitance	V _{DS} =-5V,V _{GS} =0V,f=1MHz	---	30	---	pF
C _{Oss}	Output Capacitance		---	10	---	
C _{rss}	Reverse Transfer Capacitance		---	5	---	
SWITCHING CHARACTERISTICS ⁴						
T _{d(on)}	Turn-On Delay Time	V _{DD} =-15V, R _L =50Ω, I _D =-2.5A	---	2.5	---	ns
T _r	Rise Time		---	1	---	
T _{d(off)}	Turn-Off Delay Time		---	16	---	
T _f	Fall Time		---	8	---	
SOURCE-DRAIN DIODE CHARACTERISTICS						
I _S	Continuous Current		---	---	-0.13	A
I _{SM}	Pulsed Current		---	---	-0.52	
V _{SD}	Diode forward voltage ³	I _S =-0.13A, V _{GS} = 0V	---	---	-2.2	V

Notes :

1. Repetitive rating : Pulse width limited by junction temperature.
2. Surface mounted on FR4 board , t≤10s.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle≤2%.
4. Guaranteed by design, not subject to producing.

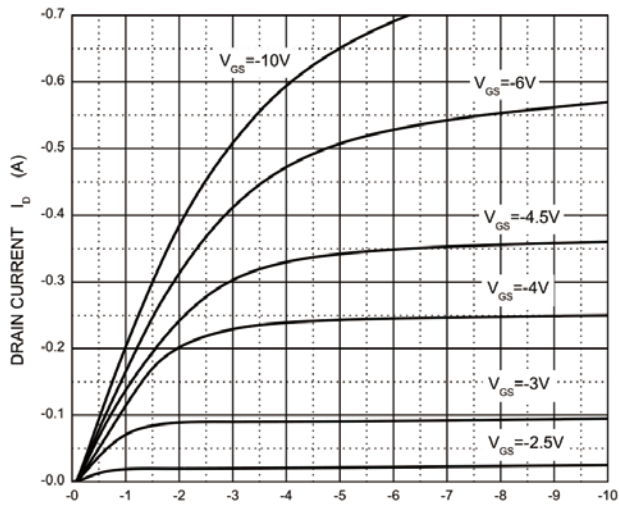
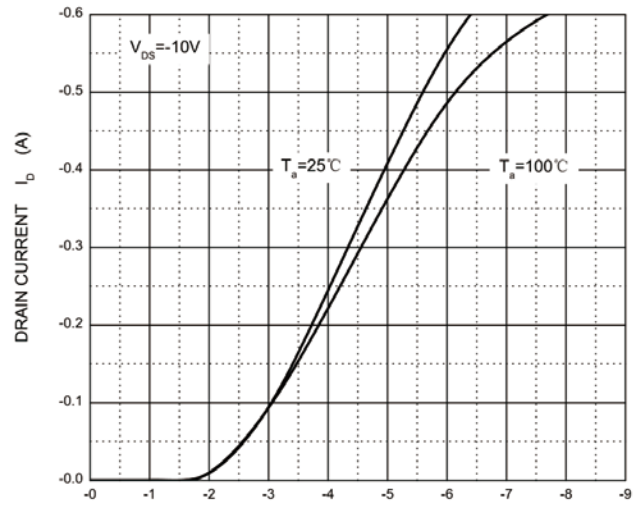
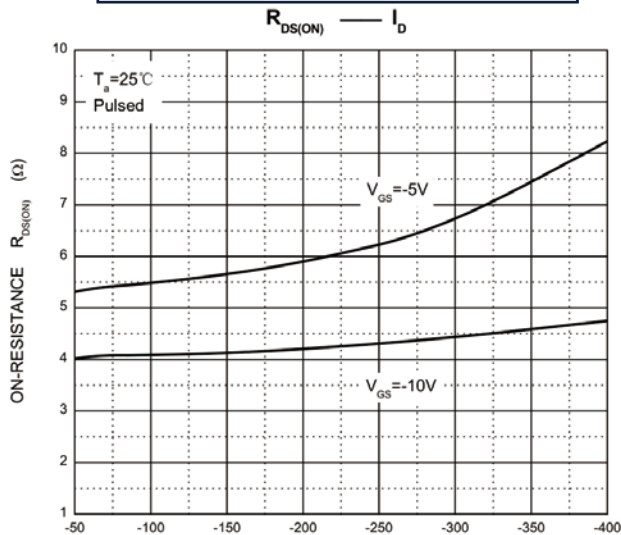
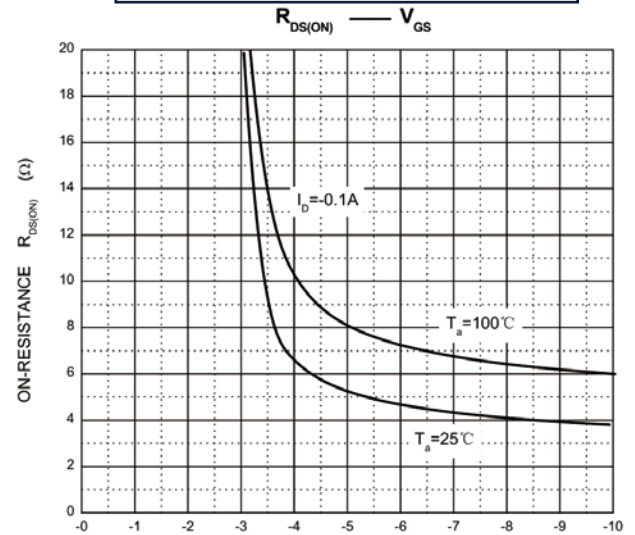
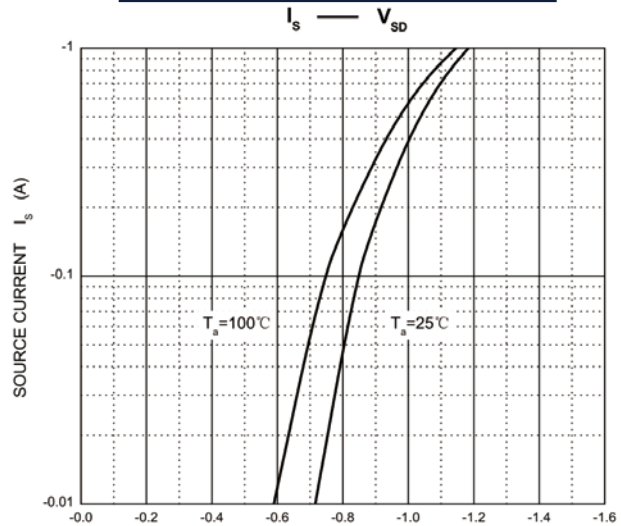
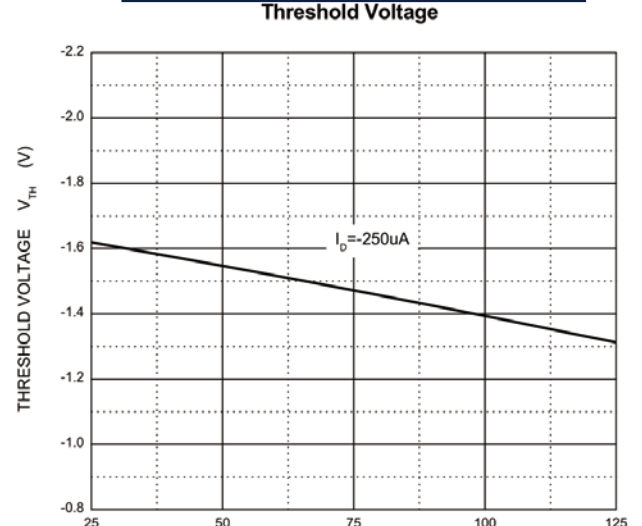


TWTLSEMI

TL-BSS84W

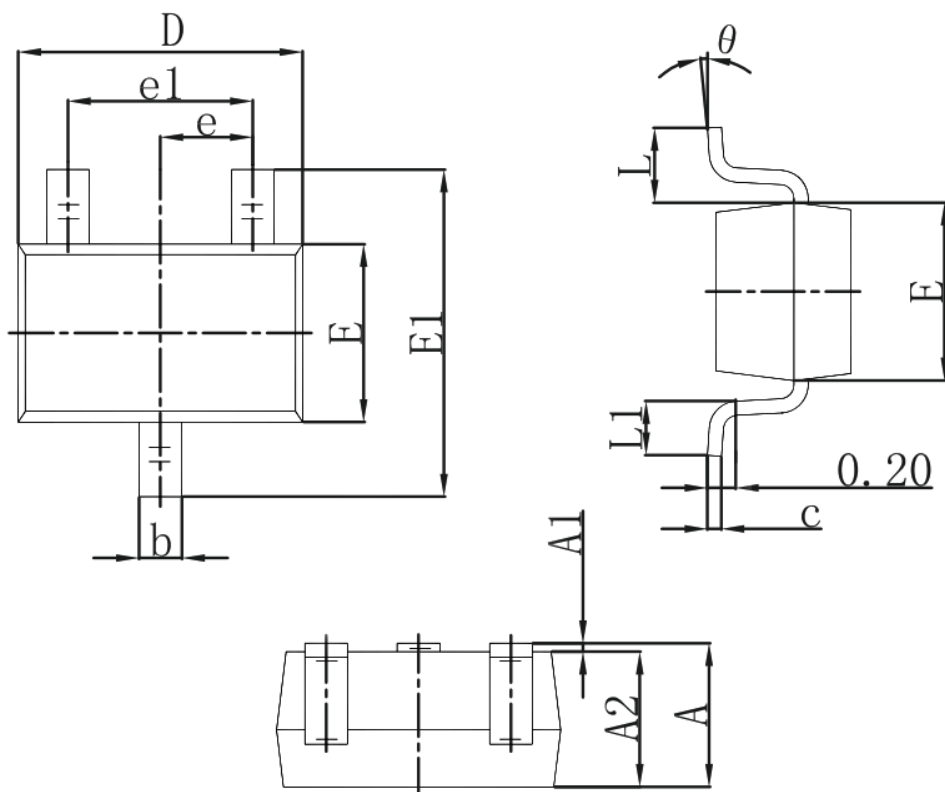
SOT-323 -50V P-CHANNEL MOSFET

Typical Characteristics

Output CharacteristicsDRAIN TO SOURCE VOLTAGE $V_{DS}(V)$ **Transfer Characteristics**GATE TO SOURCE VOLTAGE $V_{GS}(V)$ DRAIN CURRENT $I_D(A)$ GATE TO SOURCE VOLTAGE $V_{GS}(V)$ SOURCE TO DRAIN VOLTAGE $V_{SD}(V)$ JUNCTION TEMPERATURE $T_J(^{\circ}C)$



SOT-323 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	1.350	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°