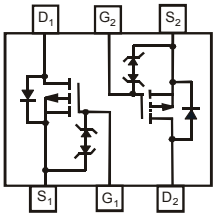
Dual P-channel MOSFET

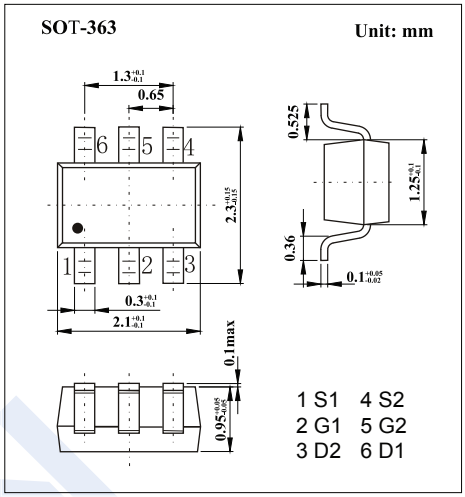
BSS84DW

■ Features

- $V_{DS\ (V)}$ = -50V
- I_D = -130mA
- $R_{DS(on)max}$ = 10Ω @ V_{GS} =-5V
- Low On-Resistance
- Low Gate Threshold Voltage
- Low Input Capacitance
- Fast Switching Speed



Top View
Internal Schematic



■ Absolute Maximum Ratings (T_A = 25℃ Unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-50	V
Gate-Source Voltage	V_{GS}	±20	
Continuous Drain Current	I_D	-130	mA
Power Dissipation	P_D	300	mW
Thermal Resistance, Junction- to-Ambient	$R_{\theta JA}$	417	℃/W
Junction Temperature	T_J	150	℃
Junction Storage Temperature Range	T_{STG}	-55 to 150	

Note 1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.

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■ Electrical Characteristics (T_A = 25℃ Unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	I_D=-250μA, V_{GS}=0V	-50			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-50V, V_{GS}=0V, T_J = 25℃			-1	μA
		V_{DS}=-50V, V_{GS}=0V, T_J = 125℃			-2	
		V_{DS}=-25V, V_{GS}=0V, T_J = 25℃			100	nA
Gate-Body Leakage Current	I_{GSS}	V_{DS}=0V, V_{GS}=±20V			±10	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} , I_D=-250μA	-0.8		-2.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-5V, I_D=-100mA			10	Ω
Forward Transconductance	g_{FS}	V_{DS}=-25V, I_D=-0.1A	50			mS
Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=-16V, f=1MHz			175	pF
Output Capacitance	C_{oss}				30	
Reverse Transfer Capacitance	C_{rss}				20	
Turn-On Delay Time	$t_{D(ON)}$	V_{DD} = -30V, I_D = -0.27A, R_{GEN} = 50Ω, V_{GS} = -10V		10		ns
Turn-Off Delay Time	$t_{D(OFF)}$			18		
Diode Forward Voltage	V_{SD}	I_{SD}=-115mA, V_{GS}=0V			-1.2	V

■ Marking

Marking	K84

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■ Typical Characterisitics

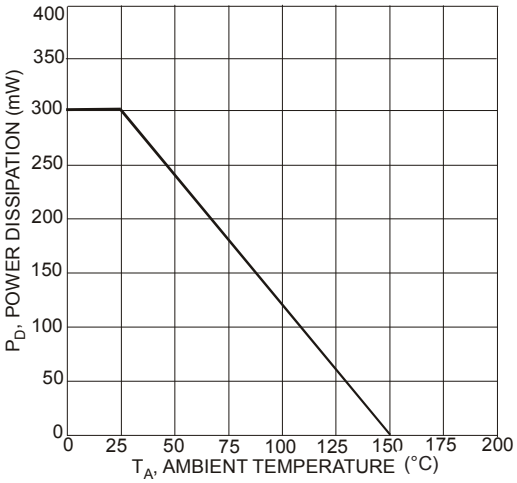

Fig. 1 Max Power Dissipation vs. Ambient Temperature

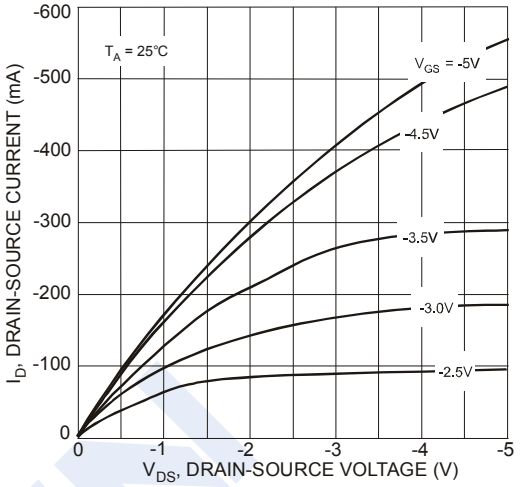

Fig. 2 Drain-Source Current vs. Drain-Source Voltage

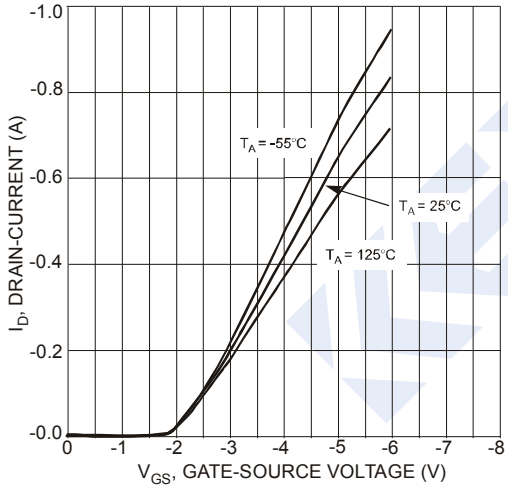

Fig. 3 Drain-Current vs. Gate-Source Voltage

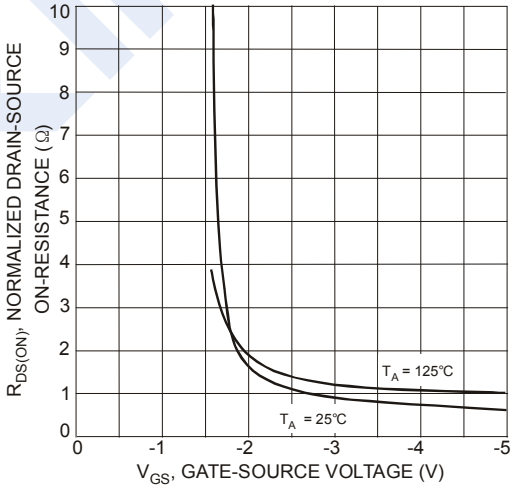

Fig. 4 On-Resistance vs. Gate-Source Voltage

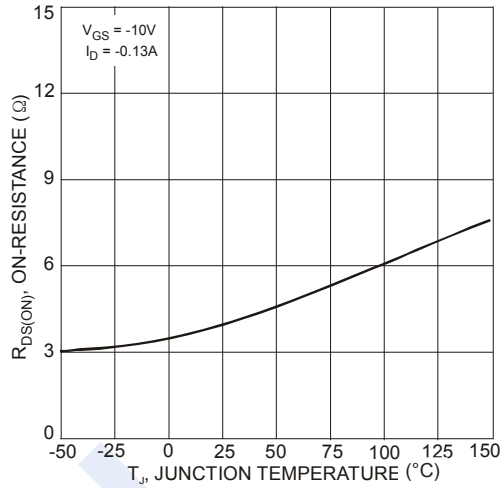

Fig. 5 On-Resistance vs. Junction Temperature

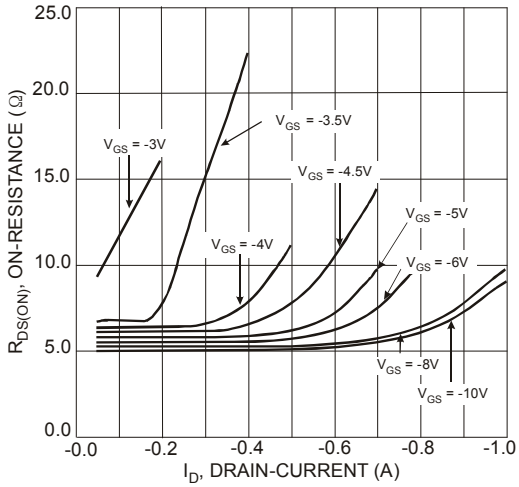

Fig. 6 On-Resistance vs. Drain-Current