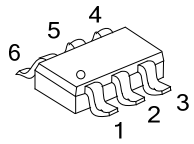
BSS84ZDW **Preliminary** ***Power MOSFET***

0.13A, 50V P-CHANNEL ENHANCEMENT MODE FIELD EFFECT TRANSISTOR



SOT-363

■ DESCRIPTION

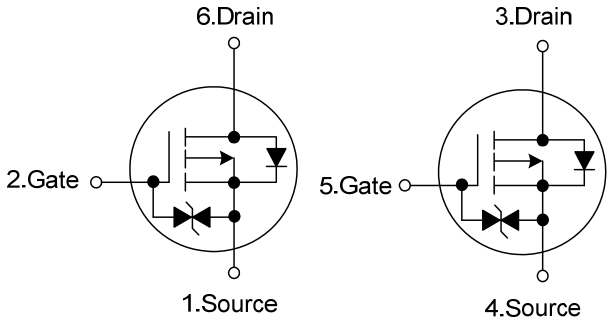
These P-Channel enhancement mode field vertical D-MOS transistors are in a SOT-363 SMD package, and in most applications they require up to 0.13A DC and can deliver current up to 0.52A.

This product is particularly suited to low voltage applications requiring a low current high side switch.

■ FEATURES

* $R_{DS(ON)}$ < 10Ω @ V_{GS}=-4.5V, I_D=-0.1A

■ SYMBOL



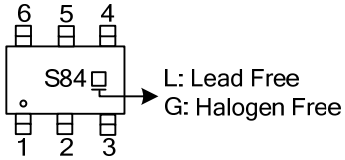
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment						Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
BSS84ZDWL-AL6-R	BSS84ZDWG-AL6-R	SOT-363	S1	G1	D2	S2	G2	D1	Tape Reel

BSS84ZDWG-AL6-R

(1)Packing Type	(1) R: Tape Reel
(2)Package Type	(2) AL6: SOT-363
(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A = 25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Drain-Source Voltage		V_{DSS}	-50	V
Gate-Source Voltage		V_{GSS}	±20	V
Continuous Drain Current	DC	I_D	-0.13	A
	Pulse		-0.52	A
Power Dissipation		P_D	0.36	W
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	350	°C/W

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V, I_D=-250μA	-50			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-50V, V_{GS}=0V			-15	μA
Gate–Body Leakage, Forward	I_{GSS}	V_{DS}=0V, V_{GS}=±20V			±10	μA
ON CHARACTERISTICS (Note)						
Gate-Threshold Voltage	$V_{GS(TH)}$	V_{DS}=V_{GS}, I_D=-1m A	-0.8	-1.7	-2	V
Static Drain–Source On–Resistance	$R_{DS(ON)}$	V_{GS}=-4.5V, I_D=-0.1A		1.2	10	Ω
On-State Drain Current	$I_{D(ON)}$	V_{GS}=-10 V, V_{DS}=-5V	-0.6			A
Forward Transconductance	g_{FS}	V_{DS}=-25V, I_D=-0.1A	0.05	0.6		S
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	V_{DS}=-25V, V_{GS}=0V, f=1MHz		73		pF
Output Capacitance	C_{OSS}			10		pF
Reverse Transfer Capacitance	C_{RSS}			5		pF
SWITCHING PARAMETERS (Note)						
Total Gate Charge	Q_G	V_{DS}=-30V, V_{GS}=-10V, I_D=-0.1A		0.9	1.3	nC
Gate Source Charge	Q_{GS}			0.2		nC
Gate Drain Charge	Q_{GD}			0.3		nC
Turn-ON Delay Time	$t_{D(ON)}$	V_{DD}=-30V, I_D=-0.1A,V_{GS}=-10V, R_G=6Ω,		2.5	5	ns
Turn-ON Rise Time	t_R			6.3	13	ns
Turn-OFF Delay Time	$t_{D(OFF)}$			10	20	ns
Turn-OFF Fall-Time	t_F			4.8	9.6	ns
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
Max. Diode Forward Current	I_S				-0.13	A
Pulsed Drain-Source Current	I_{Sm}				-0.52	A
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}= 0V, I_S=-0.13A (Note)		-0.8	-1.2	V

Note: Pulse test, pulse width ≤ 300us, duty cycle≤ 2%