



BSS84ZT

Power MOSFET

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

DESCRIPTION

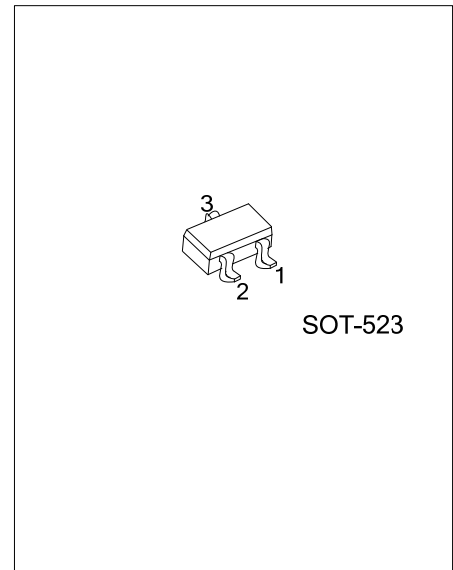
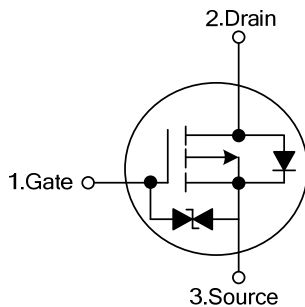
These P-Channel enhancement mode field vertical D-MOS transistors are in a SOT-523 SMD package, and in most applications they require up to 0.13A DC and can deliver current up to 0.52A.

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

FEATURES

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

SYMBOL



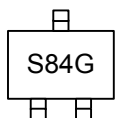
ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
BSS84ZTG-AN3-R	SOT-523	S	G	D	Tape Reel

Note: Pin Assignment: S: Source G: Gate D: Drain

<p>BSS84ZTG-AN3-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) R: Tape Reel (2) AN3: SOT-523 (3) G: Halogen Free and Lead Free
---	---

MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$, 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	-0.13	A
	Pulse	-0.52	
Power Dissipation	P_D	0.15	W
Junction Temperature	T_J	+150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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}	625	$^\circ\text{C/W}$

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=-250\mu A$	-50			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-50V, V_{GS}=0V$			-15	μA
Gate-Body Leakage, Forward	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 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	$t_{D(ON)}$	$V_{DD}=-30V, I_D=-0.1A, V_{GS}=-10V, R_G=6\Omega,$		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						
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_S=-0.13A$ (Note)		-0.8	-1.2	V
Max. Diode Forward Current	I_S				-0.13	A
Pulsed Drain-Source Current	I_{Sm}				-0.52	A

Note: Pulse test, pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.