

BW3402

N-Channel Enhancement-Mode MOSFETs

Mechanical Data

- Case: SOT-23 Molded plastic
- Epoxy: UL94V-O rate flame retardant
- RoHS compliant package

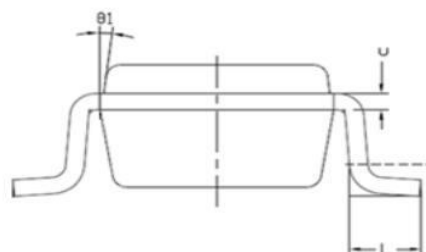
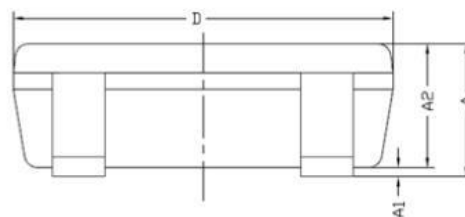
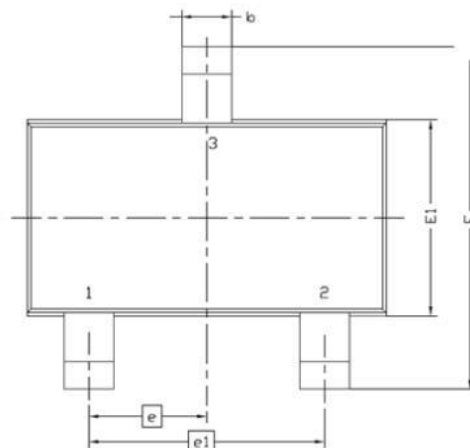
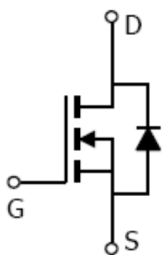
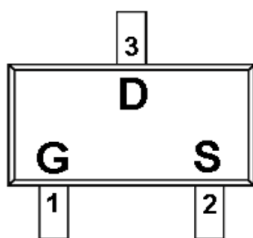
Packing & Order Information

3,000/Reel



**RoHS
COMPLIANT**

Graphic symbol



Symbol	MILLIMETERS	
	MIN	MAX
A	0.8	1.2
A1	0	0.1
A2	0.7	1.1
b	0.3	0.5
c	0.1	0.2
D	2.7	3.1
E	2.6	3
E1	1.4	1.8
e	0.95 BSC	
e1	1.9 BSC	
L	0.3	0.6
θ1	7° NOM	

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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings (Tc=25°C unless otherwise noted)

Parameter	Symbol	BW3402	Unit
Drain-Source Voltage	BVDSS	30	V
Gate- Source Voltage	VGS	12	V
Drain Current (continuous)	ID	4.6	A
Drain Current (pulsed)	IDM	16	A
Thermal resistance, junction to ambient air	PD	1380	mW
Junction	TJ	150	°C
Storage Temperature	TSTG	-55 to +150	°C

Maximum Ratings (Tc=25°C unless otherwise noted)

Parameter	Symbol	Min	Typ.	Max.	Units
Drain-Source Breakdown Voltage ($I_D = 250\mu A, V_{GS} = 0 V$)	BV_{DSS}	30		--	V
Gate Threshold Voltage ($I_D = 250\mu A, V_{GS} = V_{DS}$)	$V_{GS(th)}$	0.7		18	V
Diode Forward Voltage Drop ($I_S = 1 A, V_{GS} = 0 V$)	VSD	--		1	V
Zero Gate Voltage Drain Current ($V_{GS}=0V, V_{DS}= 24V$) ($V_{GS}=0V, V_{DS}= 24V, T_A=55^{\circ}C$)	IDSS			1 5	μA

Maximum Ratings (Tc=25°C unless otherwise noted)

Parameter	Symbol	Min	Typ.	Max.	Units
Gate Body Leakage ($V_{GS} = +12 V, V_{DS} = 0 V$)	IGSS	--		+/-100	nA
Static Drain-Source On-State Resistance ($I_D = 4.6 A, V_{GS} = 10 V$)	RDS(ON)	--		30	mΩ
Static Drain-Source On-State Resistance ($I_D = 4 A, V_{GS} = 4.5 V$)		--		50	mΩ
Static Drain-Source On-State Resistance ($I_D = 1 A, V_{GS} = 2.5 V$)				100	pF
Input Capacitance ($V_{GS} = 0 V, V_{DS} = 15 V, f = 1MHz$)	CISS		954	--	pF
Output Capacitance ($V_{GS} = 0 V, V_{DS} = 15 V, f = 1MHz$)	COSS		115	--	pF
Turn-ON Time ($V_{DS} = 15 V, V_{GS} = 10 V, R_{GEN} = 6 \Omega$)	t(on)		6.3	--	ns
Turn-OFF Time ($V_{DS} = 15 V, V_{GS} = 10 V, R_{GEN} = 6 \Omega$)	t(off)	--	38.2	--	ns

Pulse Width<300μs; Duty Cycle<2.0%

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■ Characteristics Curve

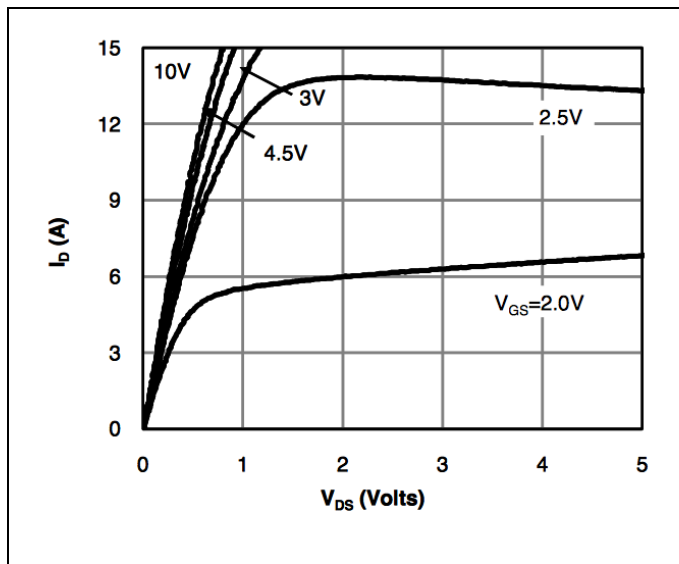


FIG.1-On-Region Characteristics

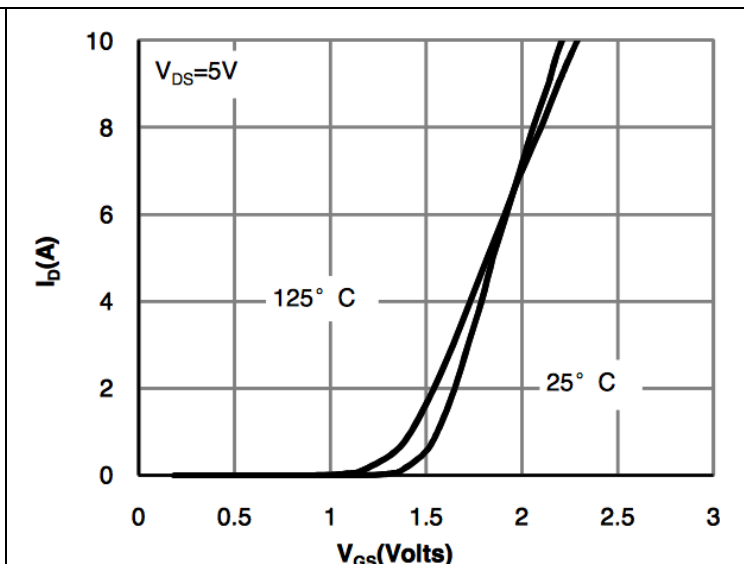


FIG.2-Transfer Characteristics

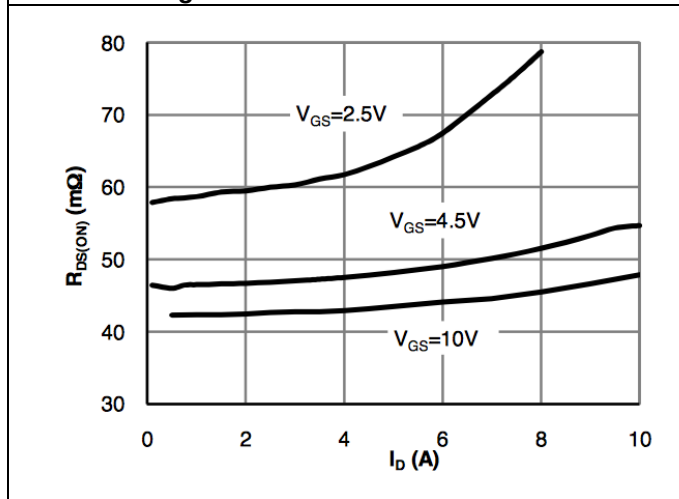


FIG.3-On-Resistance vs. Drain Current and Gate Voltage

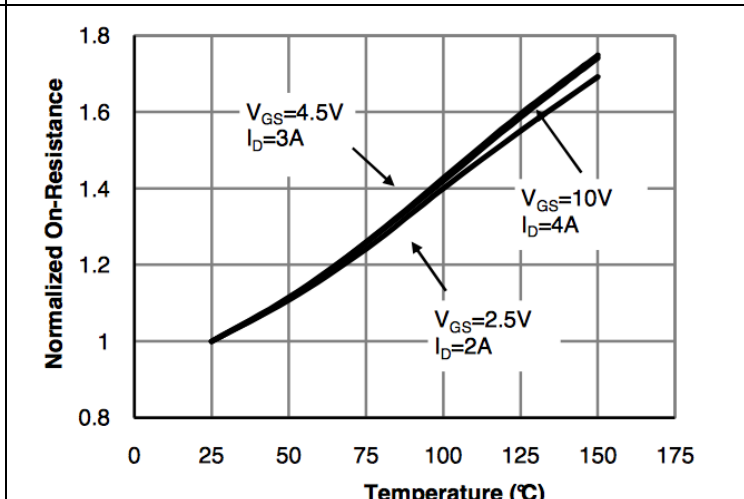


FIG.4-On-Resistance vs. Junction Temperature

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■ Characteristics Curves

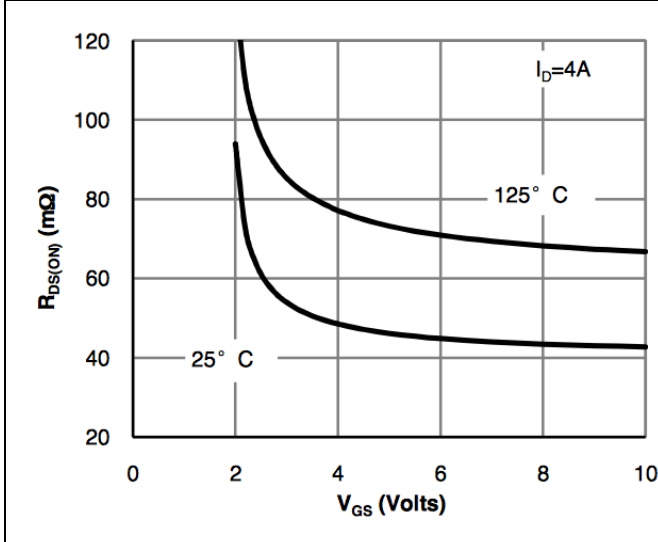


FIG.5-On-Resistance vs. Gate-Source Voltage

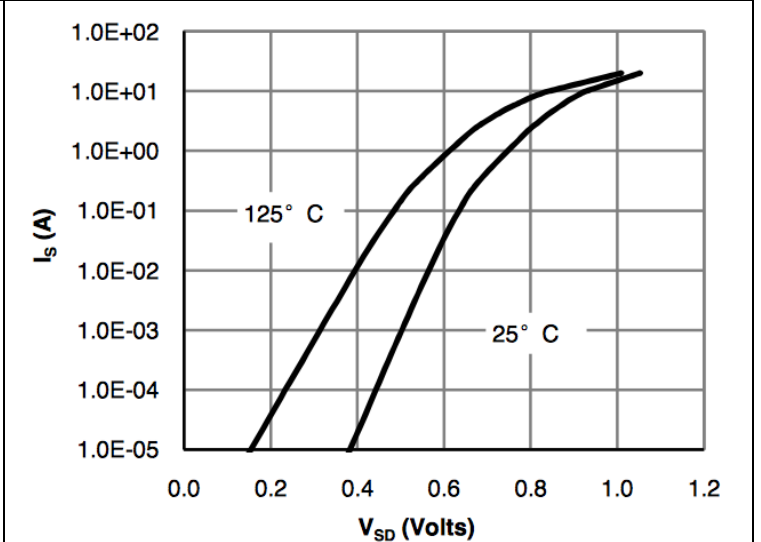


FIG.6-Body-Diode Characteristics

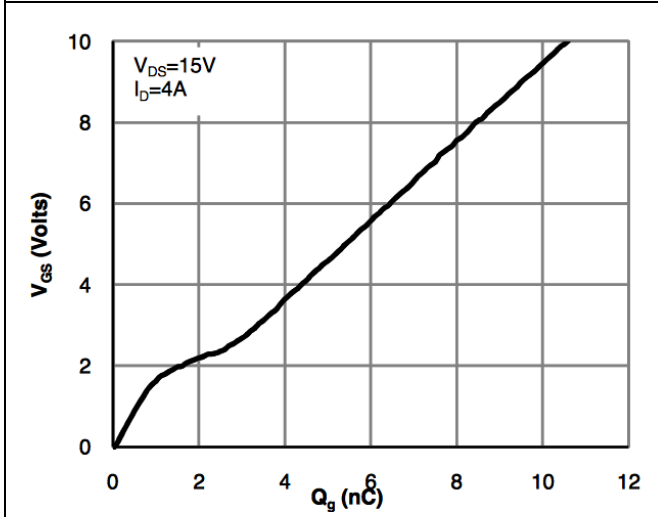


FIG.7-Gate-Charge Characteristics

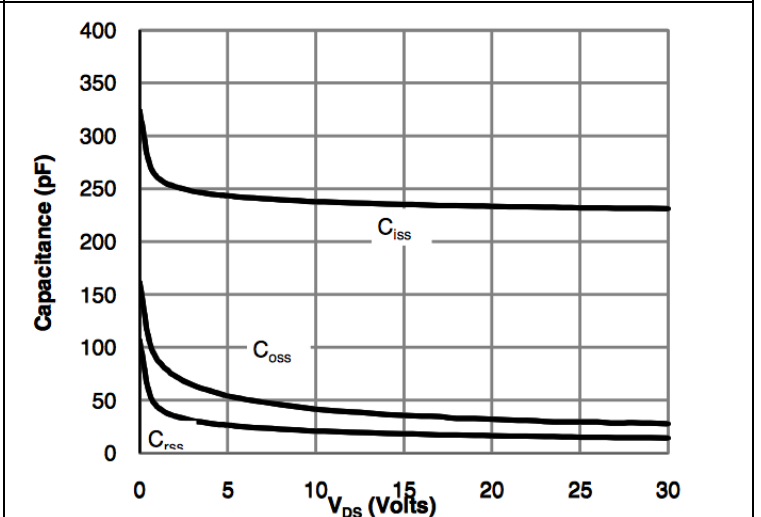


FIG.8-Capacitance Characteristics

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