



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Features and Benefits

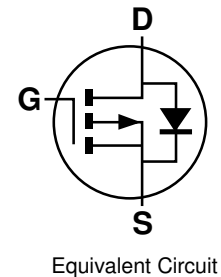
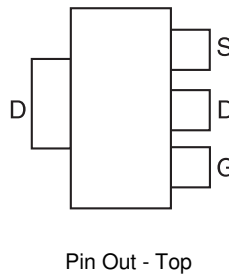
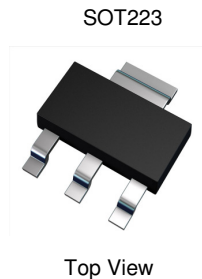
- 240 Volt VDS
- $R_{DS(on)}$ = 8.8W typical at $V_{GS} = -3.5V$
- Low Threshold and Fast Switching
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

Applications

- Electronic Hook Switches
- Telecoms and Battery Powered Equipment

Mechanical Data

- Case: SOT223
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish (E3)
- Weight: 0.112 grams (Approximate)

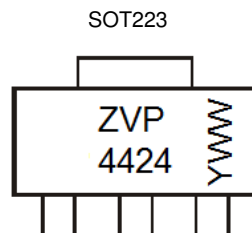


Ordering Information (Note 4)

Part Number	Marking	Reel size (inches)	Tape width (mm)	Quantity per reel
ZVP4424GTA	ZVP4424	7	8	1,000

- Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
 2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

Marking Information



ZVP4424 = Product Type Marking Code
 YWW = Date Code Marking
 Y or \bar{Y} = Last Digit of Year (ex: 5= 2015)
 WW or $\bar{W}W$ = Week Code (01~53)

ABSOLUTE MAXIMUM RATINGS

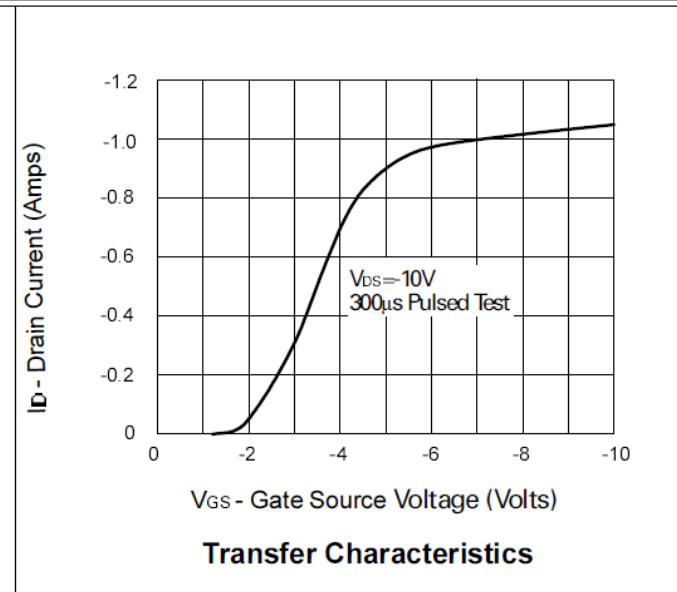
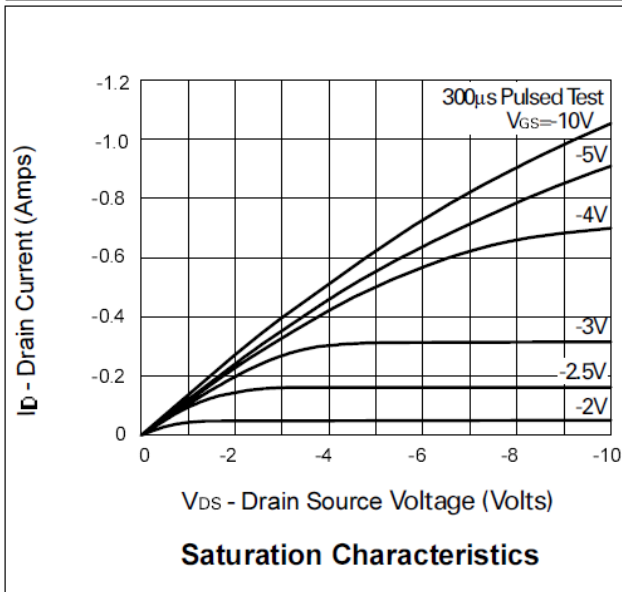
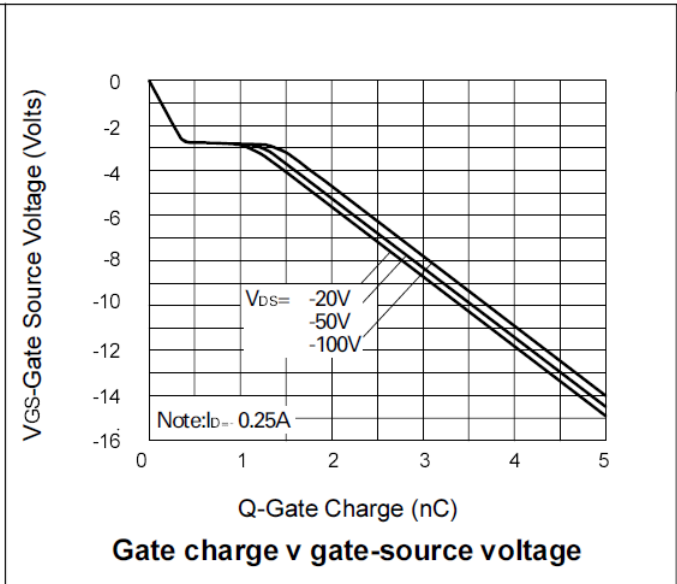
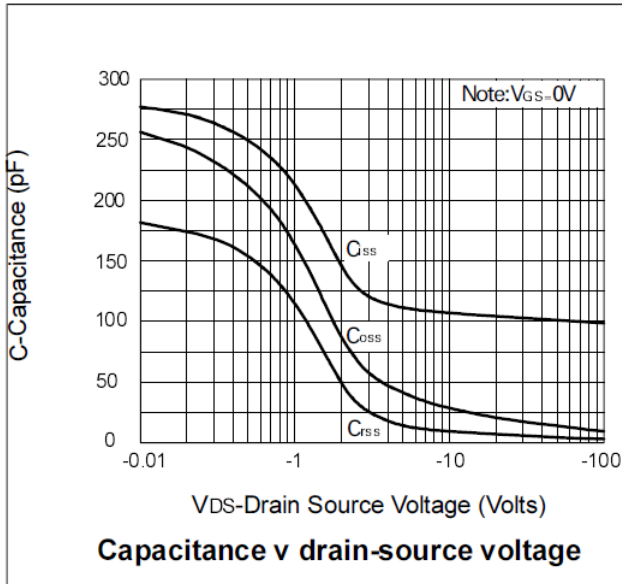
Characteristic	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	-240	V
Gate-Source Voltage	V_{GSS}	± 40	V
Continuous Drain Current (@ $T_A = +25^\circ\text{C}$)	I_D	-480	mA
Pulsed Drain Current	I_{DM}	-1.0	A
Power Dissipation (@ $T_A = +25^\circ\text{C}$)	P_D	2.5	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (@ $T_A = +25^\circ\text{C}$, unless otherwise stated.)

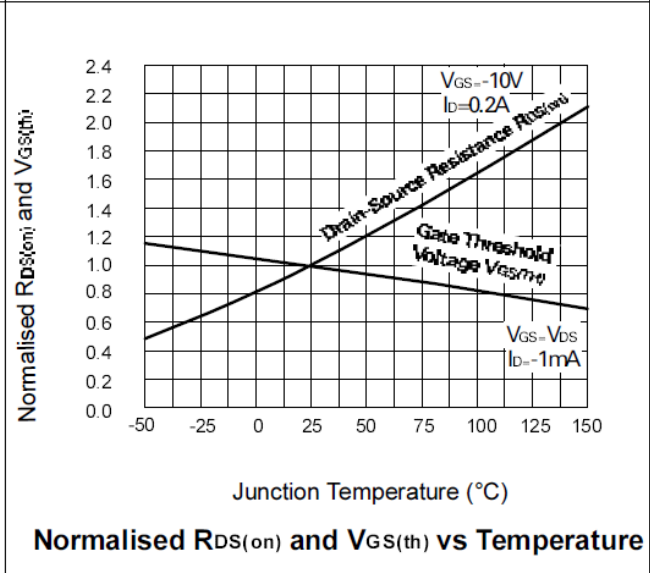
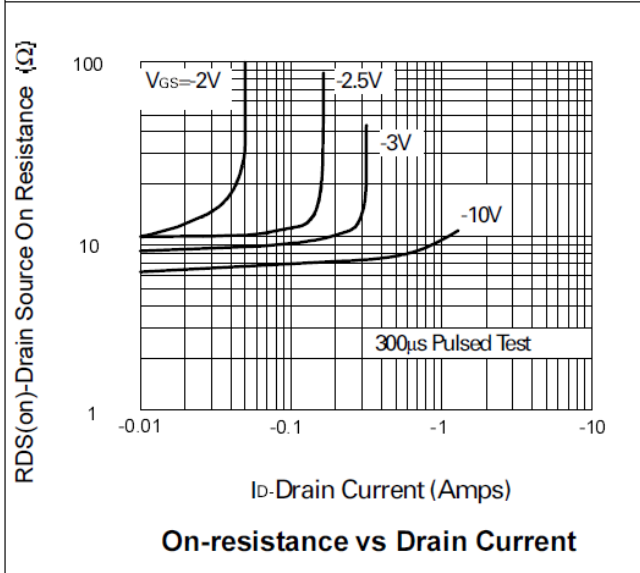
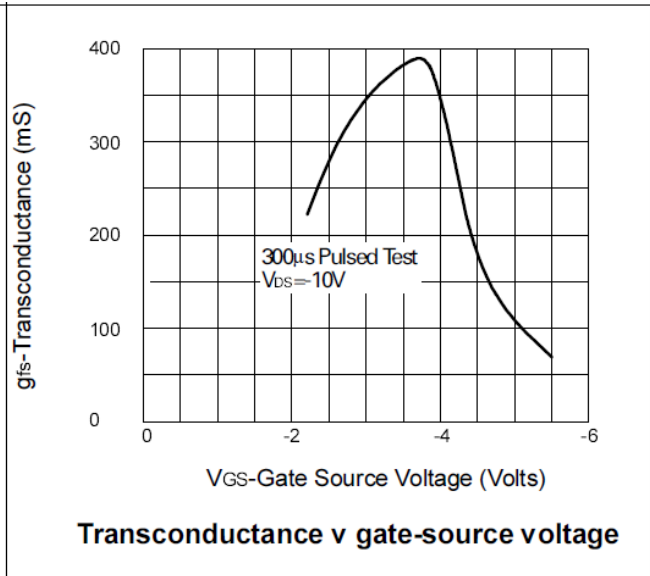
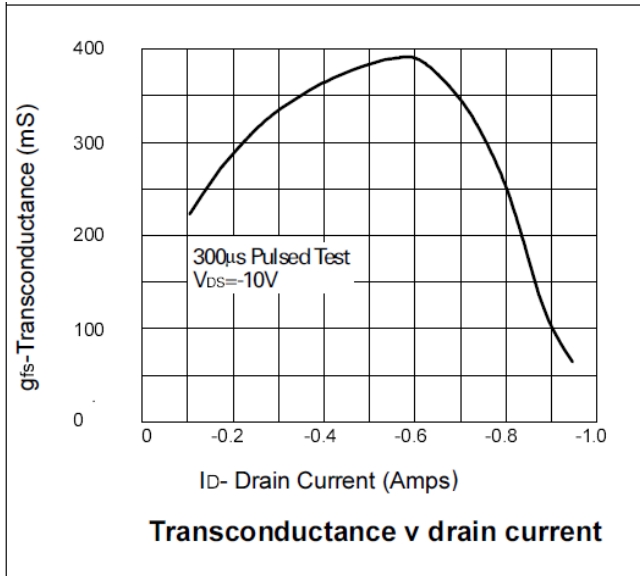
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV_{DSS}	-240	-	-	V	$V_{GS} = 0V, I_D = -1mA$
Zero Gate Voltage Drain Current $T_J = +25^\circ\text{C}$	I_{DSS}	-	-	-10 -100	μA μA	$V_{DS} = -240V, V_{GS} = 0V$ $V_{DS} = -190V, V_{GS} = 0V, T_A = +125^\circ\text{C}$
Gate-Source Leakage	I_{GSS}	-	-	100	nA	$V_{GS} = \pm 40V, V_{DS} = 0V$
On-State Drain Current	$I_{D(ON)}$	-0.75	-1.0	-	A	$V_{GS} = -10V, V_{DS} = -10V$
ON CHARACTERISTICS						
Gate Threshold Voltage	$V_{GS(TH)}$	-0.7	-1.4	-2.0	V	$V_{DS} = V_{GS}, I_D = -1mA$
Static Drain-Source On-Resistance	$R_{DS(ON)}$	-	7.1 8.8	9 11	Ω Ω	$V_{GS} = -10V, I_D = -200mA$ $V_{GS} = -3.5V, I_D = -100mA$
Forward Transconductance (Notes 5 & 6)	g_{fs}	125	-	-	mS	$V_{DS} = -10V, I_D = -0.2A$
DYNAMIC CHARACTERISTICS (Note 6)						
Input Capacitance	C_{iss}	-	100	200	pF	$V_{DS} = -25V, V_{GS} = 0V,$ $f = 1.0MHz$
Output Capacitance	C_{oss}	-	18	25	pF	
Reverse Transfer Capacitance	C_{rss}	-	5	15	pF	
Turn-On Delay Time (Note 7)	$t_{D(ON)}$	-	8	15	ns	
Turn-On Rise Time (Note 7)	t_R	-	8	15	ns	
Turn-Off Delay Time (Note 7)	$t_{D(OFF)}$	-	26	40	ns	
Turn-Off Fall Time (Note 7)	t_F	-	20	30	ns	$V_{DD} \approx -50V, I_D = -0.25A,$ $V_{GEN} = -10V$

- Notes:
5. Measured under pulsed conditions. Width=300ms. Duty cycle $\leq 2\%$.
 6. Sample test.
 7. Switching times measured with 50 Ω source impedance and <5ns rise time on a pulse generator
spice parameter data is available upon request for this device.

Typical Characteristics

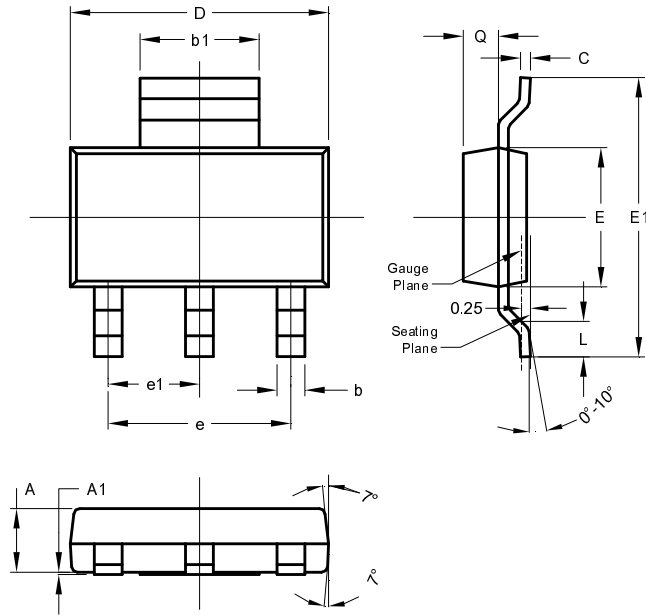


Typical Characteristics (continued)



Package Outline Dimensions

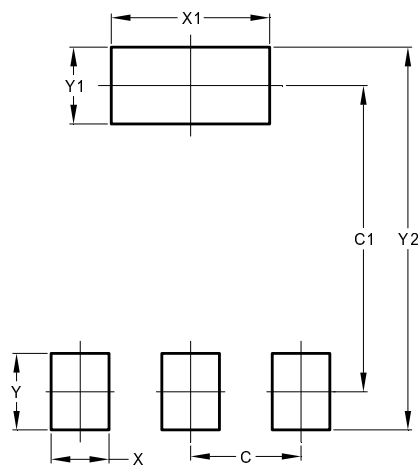
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



SOT223			
Dim	Min	Max	Typ
A	1.55	1.65	1.60
A1	0.010	0.15	0.05
b	0.60	0.80	0.70
b1	2.90	3.10	3.00
C	0.20	0.30	0.25
D	6.45	6.55	6.50
E	3.45	3.55	3.50
E1	6.90	7.10	7.00
e	-	-	4.60
e1	-	-	2.30
L	0.85	1.05	0.95
Q	0.84	0.94	0.89
All Dimensions in mm			

Suggested Pad Layout

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version.



Dimensions	Value (in mm)
C	2.30
C1	6.40
X	1.20
X1	3.30
Y	1.60
Y1	1.60
Y2	8.00

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