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[Vishay/Siliconix](#)

[SI1405BDH-T1-E3](#)

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Specification Comparison

Vishay Siliconix

Si1405BDH vs. Si1405DL

Description: P-Channel 1.8-V (G-S) MOSFET
Package: SC70-6
Pin Out: Identical

Part Number Replacements

Si1405BDH-T1-E3 Replaces Si1405DL-T1-E3
 Si1405BDH-T1-E3 Replaces Si1405DL-T1

ABSOLUTE MAXIMUM RATINGS ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise noted)					
Parameter		Symbol	Si1405BDH	Si1405DL	Unit
Drain-Source Voltage		V_{DS}	- 8	- 8	V
Gate-Source Voltage		V_{GS}	± 8	± 8	
Continuous Drain Current	$T_A = 25\text{ }^{\circ}\text{C}$	I_D	- 1.6	- 1.8	A
	$T_A = 85\text{ }^{\circ}\text{C}^a$		- 1.2	- 1.5	
Pulsed Drain Current		I_{DM}	- 8	- 5	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 1.47	- 0.8	
Power Dissipation	$T_A = 25\text{ }^{\circ}\text{C}$	P_D	1.47	0.625	W
	$T_A = 85\text{ }^{\circ}\text{C}^a$		0.95	0.400	
Operating Junction and Storage Temperature Range		T_J and T_{stg}	- 55 to 150	- 55 to 150	$^{\circ}\text{C}$
Maximum Junction-to-Ambient		R_{thJA}	85	200	$^{\circ}\text{C/W}$

SPECIFICATIONS (T _J = 25 °C, unless otherwise noted)									
Parameter		Symbol	Si1405BDH			Si1405DL			Unit
			Min	Typ	Max	Min	Typ	Max	
Static									
Gate-Threshold Voltage		V _{GS(th)}	- 0.45		- 0.95	- 0.45		NS ^b	V
Gate-Body Leakage		I _{GSS}			± 100			± 100	nA
Zero Gate Voltage Drain Current		I _{DSS}			- 1			- 1	μA
On-State Drain Current	V _{GS} = - 4.5 V	I _{D(on)}	- 8			- 2			A
Drain-Source On-Resistance	V _{GS} = - 4.5 V	r _{DS(on)}		0.091	0.112		0.100	0.125	Ω
	V _{GS} = - 2.5 V			0.132	0.160		0.130	0.160	
	V _{GS} = - 1.8 V			0.171	0.205		0.170	0.210	
Forward Transconductance		g _{fs}		4.8			3.8		S
Diode Forward Voltage		V _{SD}		- 0.8	- 1.2		- 0.76	- 1.1	V
Dynamic									
Total Gate Charge		Q _g		3.67	5.5		5.5	7.0	nC
Gate-Source Charge		Q _{gs}		0.61			0.9		
Gate-Drain Charge		Q _{gd}		0.98			0.9		
Gate Resistance		R _g		6.3			NS ^b		Ω

Notes:

a. T_A is $70\text{ }^{\circ}\text{C}$ for Si1405BDH.

b. NS denotes not specified in original datasheet.

Specification comparisons are supplied as a courtesy to compare two devices and do not constitute a commercial product datasheet or any guarantee of identical performance. Designers should refer to the appropriate datasheets of the same number for guaranteed specification limits.