



## Si5404BDC vs. Si5404DC

**Description:** N-Channel, 2.5-V (G-S) MOSFET  
**Package:** 1206-8 ChipFET®  
**Pin Out:** Identical

### Part Number Replacements:

Si5404BDC-T1 Replaces Si5404DC-T1  
 Si5404BDC-T1—E3 (Lead (Pb)-Free version) Replaces Si5404DC-T1—E3

勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-34970699  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

### Summary of Performance:

The Si5404BDC is the replacement for the original Si5404DC; both parts perform identically including limits to the parametric tables below.

ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> = 25 °C UNLESS OTHERWISE NOTED)				
Parameter	Symbol	Si5404BDC	Si5404DC	Unit
Drain-Source Voltage	V <sub>DS</sub>	20	20	V
Gate-Source Voltage	V <sub>GS</sub>	± 12	± 12	
Continuous Drain Current	I <sub>D</sub>	T <sub>A</sub> = 25°C	7.5	7.2
		T <sub>A</sub> = 70°C	5.4	5.2
Pulsed Drain Current	I <sub>DM</sub>	20	20	A
Continuous Source Current (MOSFET Diode Conduction)	I <sub>S</sub>	2.1	2.1	
Power Dissipation	P <sub>D</sub>	T <sub>A</sub> = 25°C	2.5	2.5
		T <sub>A</sub> = 70°C	1.3	1.3
Operating Junction and Storage Temperature Range	T <sub>J</sub> and T <sub>stg</sub>	-55 to 150	-55 to 150	°C
Maximum Junction-to-Ambient	R <sub>thJA</sub>	50	50	°C/W

SPECIFICATIONS (T <sub>J</sub> = 25 °C UNLESS OTHERWISE NOTED)								
Parameter	Symbol	Si5404BDC			Si5404DC			Unit
		Min	Typ	Max	Min	Typ	Max	
<b>Static</b>								
Gate-Threshold Voltage	V <sub>GS(th)</sub>	0.6		1.5	0.6			V
Gate-Body Leakage	I <sub>GSS</sub>			± 100			± 100	nA
Zero Gate Voltage Drain Current	I <sub>DSS</sub>			1			1	µA
On-State Drain Current	I <sub>D(on)</sub>	20			20			A
Drain-Source On-Resistance	r <sub>DS(on)</sub>	V <sub>GS</sub> = 4.5 V	0.022	0.028		0.016	0.019	Ω
		V <sub>GS</sub> = 2.5 V	0.031	0.039		0.038	0.045	
Forward Transconductance	g <sub>fs</sub>		26			20		S
Diode Forward Voltage	V <sub>SD</sub>		0.7			0.8	1.2	V
<b>Dynamic</b>								
Total Gate Charge	Q <sub>g</sub>		7	11		12	18	nC
Gate-Source Charge	Q <sub>gs</sub>		1.7			2.4		
Gate-Drain Charge	Q <sub>gd</sub>		2			3.2		
Gate Resistance	R <sub>g</sub>		1.7			NS*		Ω
<b>Switching</b>								
Turn-On Time	t <sub>d(on)</sub>		12	20		20	30	ns
	t <sub>r</sub>		12	20		40	60	
Turn-Off Time	t <sub>d(off)</sub>		25	40		40	60	
	t <sub>f</sub>		10	20		15	23	
Source-Drain Reverse Recovery Time	t <sub>rr</sub>		20	40		30	60	

\*NS denotes parameter not specified in original data sheet.