Si6562CDY vs. Si6562DY

Description: **N- and P-Channel, 20-V (D-S) MOSFET**
Package: **TSSOP-8**
Pin Out: **Identical**

Part Number Replacements: Si6562CDY-T1-GE3 replaces Si6562DY-T1-GE3

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted

PARAMETER		SYMBOL		Si6562CDY	Si6562DY	UNIT
Drain-Source Voltage		V_{DS}	N-Ch	20	20	V
			P-Ch	- 20	- 20	
Gate-Source Voltage		V_{GS}	N-Ch	± 12	± 12	
			P-Ch			
Continuous Drain Current	T_A = 25 °C	I_D	N-Ch	5.7	4.5	A
			P-Ch	- 5.1	- 3.5	
	T_A = 70 °C		N-Ch	4.5	3.6	
			P-Ch	- 4.1	- 2.7	
Pulsed Drain Current		I_{DM}	N-Ch	30	30	
			P-Ch	- 30	- 30	
Continuous Source Current (MOSFET Diode Conduction)		I_S	N-Ch	0.9	1.25	
			P-Ch	- 1.0	- 1.25	
Power Dissipation	T_A = 25 °C	P_D	N-Ch	1.1	1	W
			P-Ch	2		
	T_A = 70 °C		N-Ch	0.7	0.64	
			P-Ch	0.76		
Operating Junction and Storage Temperature Range		T_J and T_{stg}		- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	N-Ch	110	125	°C/W
			P-Ch	105		

SPECIFICATIONS T_J = 25 °C, unless otherwise noted

PARAMETER		SYMBOL		Si6562CDY MIN.	Si6562CDY TYP.	Si6562CDY MAX.	Si6562DY MIN.	Si6562DY TYP.	Si6562DY MAX.	UNIT
Static										
Gate-Threshold Voltage		$V_{GS(th)}$	N-Ch	0.6		1.5	0.6		NS	V
			P-Ch	- 0.6		- 1.5	- 0.6		NS	
Gate-Body Leakage		I_{GSS}	N-Ch			± 100			± 100	nA
			P-Ch			± 100			± 100	
Zero Gate Voltage Drain Current		I_{DSS}	N-Ch			1			1	µA
			P-Ch			- 1			- 1	
On-State Drain Current	V_{GS} = 4.5 V	$I_{D(on)}$	N-Ch	30			30			A
	V_{GS} = - 4.5 V		P-Ch	- 30			- 30			
Drain-Source On-Resistance	V_{GS} = 4.5 V	$R_{DS(on)}$	N-Ch		0.018	0.022		0.023	0.030	Ω
	V_{GS} = - 4.5 V		P-Ch		0.024	0.030		0.040	0.050	
	V_{GS} = 2.5 V		N-Ch		0.029	0.036		0.030	0.040	
	V_{GS} = - 2.5 V		P-Ch		0.036	0.045		0.060	0.085	
Forward Transconductance		g_{fs}	N-Ch		17			20		S
			P-Ch		22			10		
Diode Forward Voltage		V_{SD}	N-Ch		0.8	1.2		0.65	1.2	V
			P-Ch		- 0.8	- 1.2		- 0.72	- 1.2	

SPECIFICATIONS T_J = 25 °C, unless otherwise noted									
PARAMETER	**SYMBOL**		**Si6562CDY**			**Si6562DY**			**UNIT**
			MIN.	**TYP.**	**MAX.**	**MIN.**	**TYP.**	**MAX.**	
Dynamic									
Total Gate Charge	Q_g	N-Ch		6.7	11		13	25	nC
		P-Ch		17	30		14.5	25	
Gate-Source Charge	Q_{gs}	N-Ch		1.8			3.0		
		P-Ch		3			3.5		
Gate-Drain Charge	Q_{gd}	N-Ch		0.9			3.3		
		P-Ch		5.5			3.5		
Gate Resistance	R_g	N-Ch		2			NS		Ω
		P-Ch		6			NS		

Note

NS denotes not specified in original specification

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.