Si3456DDV vs. Si3456CDV

Description: **N-Channel, 30-V (D-S) MOSFET**
Package: **TSOP-6**
Pin Out: **Identical**

Part Number Replacements: Si3456DDV-T1-GE3 replaces Si3456CDV-T1-GE3
Si3456DDV-T1-E3 or Si3456DDV-T1-GE3 replaces Si3456CDV-T1-E3

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted					
PARAMETER		**SYMBOL**	**Si3456DDV**	**Si3456CDV**	**UNIT**
Drain-Source Voltage		V_{DS}	30	30	V
Gate-Source Voltage		V_{GS}	± 20	± 20	
Continuous Drain Current	T_A = 25 °C	I_D	5.0	6.1	A
	T_A = 70 °C		4.0	4.9	
Pulsed Drain Current		I_{DM}	20	20	
Continuous Source Current (MOSFET Diode Conduction)	T_A = 25 °C	I_S	1.2	1.7	
Power Dissipation	T_A = 25 °C	P_D	1.7	2.0	W
	T_A = 70 °C		1.1	1.3	
Operating Junction and Storage Temperature Range		T_J and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	74	62.5	°C/W

SPECIFICATIONS T_J = 25 °C, unless otherwise noted									
			Si3456DDV			**Si3456CDV**			
PARAMETER		**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	1.2		3.0	1.2		3.0	V
Gate-Body Leakage		I_{GSS}			± 100			± 100	nA
Zero Gate Voltage Drain Current		I_{DSS}			1.0			1.0	µA
On-State Drain Current	V_{GS} = 10 V	$I_{D(on)}$	15			15			A
Drain-Source On-Resistance	V_{GS} = 10 V	$R_{DS(on)}$		0.033	0.040		0.028	0.034	Ω
	V_{GS} = 4.5 V			0.041	0.050		0.043	0.052	
Forward Transconductance		g_{fs}		15			12		S
Diode Forward Voltage		V_{SD}		0.8	1.2		0.8	1.2	V
Dynamic									
Total Charge		Q_g		6	9		8	12	nC
Gate-Source Charge		Q_{gs}		1.1			1.8		
Gate-Drain Charge		Q_{gd}		0.8			1.2		
Gate Resistance		R_g	0.6	2.8	5.6	2.4	4.8	7.2	Ω

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.