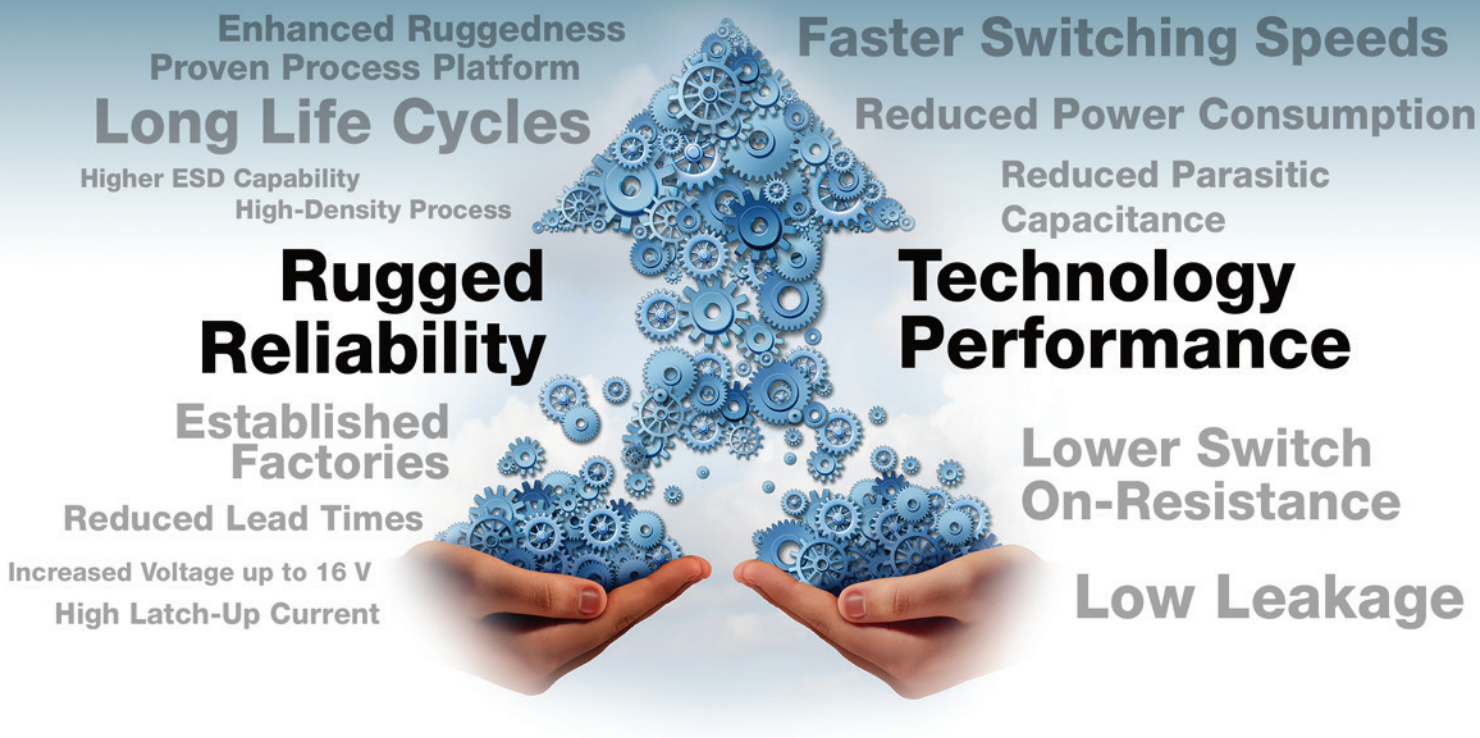
3 V to 16 V Enhanced Analog Switches and Multiplexers

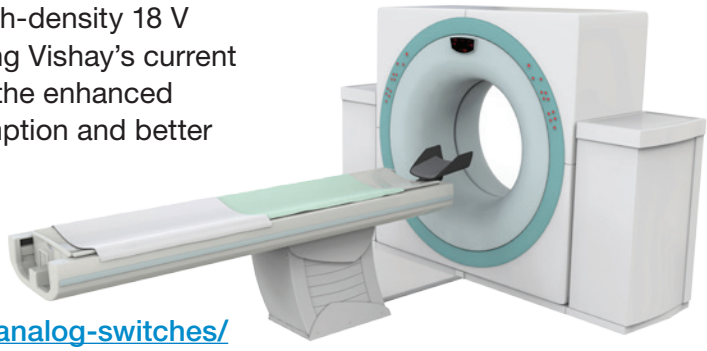


Vishay Siliconix, inventor of the analog switch, continues to develop new products and drive innovation with a new line of enhanced analog switches and multiplexers.

APPLICATIONS:

- Test equipment and data acquisition
- Audio and video signal routing
- Industrial process control and automation
- Medical and healthcare equipment
- Communication systems

The new enhanced products, designed on a proven high-density 18 V BCD process, offer an upgrade path for customers using Vishay's current 12 V series products. Through improved performance, the enhanced family addresses requirements for lower power consumption and better precision in sensitive analog designs.



For more information, please visit: www.vishay.com/analog-switches/

Contact: analogswitchtechsupport@vishay.com

DG411LE, DG412LE, DG413LE
E-Series Performance Products

Enhanced Performance

- Extended operation to 16 V single power supply and ± 8 V dual power supplies from current 12 V and ± 6 V, respectively
- Enhanced ESD / HBM from 2 kV to 2.5 kV
- Enhanced latch-up capability from 200 mA to 400 mA

Applications

- Automatic test equipment
- Data acquisition systems
- Meters and instruments
- Medical and healthcare systems
- Communication systems
- Audio and video signal routing

New products are pin-compatible with current DG411L, DG412L, DG413L series:

PACKAGE	EXISTING PART NUMBER	NEW ENHANCED PART NUMBER	EXISTING PART NUMBER	NEW ENHANCED PART NUMBER	EXISTING PART NUMBER	NEW ENHANCED PART NUMBER
PDIP16	DG411LDJ-E3	DG411LEDJ-GE3	DG412LDJ-E3	DG412LEDJ-T1-GE3	DG413LDJ-E3	DG413LEDJ-GE3
TSSOP16	DG411LDQ-E3	DG411LEDQ-GE3	DG412LDQ-E3	DG412LEDQ-GE3	DG413LDQ-E3	DG413LEDQ-GE3
TSSOP16	DG411LDQ-T1-E3	DG411LEDQ-T1-GE3	DG412LDQ-T1-E3	DG412LEDQ-T1-GE3	DG413LDQ-T1-E3	DG413LEDQ-T1-GE3
SOIC16	DG411LDY-E3	DG411LEDY-GE3	DG412LDY-E3	DG412LEDY-GE3	DG413LDY-E3	DG413LEDY-GE3
SOIC16	DG411LDY-T1-E3	DG411LEDY-T1-GE3	DG412LDY-T1-E3	DG412LEDY-T1-GE3	DG413LDY-T1-E3	DG413LEDY-T1-GE3

Specification Comparison Table (Single 12 V):

Parameter	TEMP	DG411L, DG412L, DG413L				DG411LE, DG412LE, DG413LE			
		TYP	MIN	MAX	UNIT	TYP	MIN	MAX	UNIT
Analog Switch									
Analog Signal Range	Full		0	12	V		0	12	V
Drain-Source On-Resistance	Room	20		30	Ω	16		30	Ω
	-40 °C to 85 °C			40				40	
	-55 °C to 125 °C			45				45	
Dynamic Characteristics									
Turn-On Time	Room	20		50	ns	16		50	ns
	-40 °C to 85 °C			60				60	
	-55 °C to 12 5°C			70				70	
Turn-Off Time	Room	12		30	ns	9		30	ns
	-40 °C to 85 °C			40				40	
	-55 °C to 125 °C			48				48	
Break-Before-Make Time Delay	Room	6			ns	5			ns
	-40 °C to 85 °C								
	-55 °C to 125 °C								
Charge Injection	Room	5			pC	6.6			pC
Off Isolation	Room	71			dB	68.4			dB
Crosstalk	Room	95			dB	114			dB
Source Off Capacitance	Room	5			pF	5			pF
Drain Off Capacitance	Room	6			pF	6			pF
Drain On Capacitance	Room	15			pF	15			pF