

EiceDRIVER™

1200V Gate Driver ICs for Solar Inverters and UPS

Improving efficiency is the number one objective in the field of photovoltaics: Ways of converting solar energy into electricity more efficiently are required in order to optimize the technology's cost-effectiveness. Efficiency gains of as little as one percent can still yield enormous returns in this segment.

Infineon EiceDRIVER™ with Coreless Transformer technology provides a comprehensive portfolio of high-performance Driver ICs for photovoltaic inverters. By combining EiceDRIVER™ with CoolMOS™, IGBTs, Silicon Carbide (SiC) power switches, IGBT modules Infineon enables customers to achieve their goal:

The EiceDRIVER™ single channel product 1ED020I12-F2 with functional isolation and protection functions as desaturation detection, active Miller clamp, under voltage lockout and shut down. 1ED020I12-FT in addition with two-level-turn-off, 1ED020I12-B2 respective 1ED020I12-BT with basic isolation is able to operate at transient +/- 1420V and static voltages of +/-1200V according to EN60747-5-2, recognized under UL1577. 2ED020I12-F2 is combining two complete single channel driver ICs in one condensed package for space saving benefits. 2ED020I12-FI as half bridge driver with galvanic isolated high side.

1EDI30J12CL (150mil) and 1EDI30J12CP (300mil) as the new highlights in combination with Infineon's Direct Drive SiC JFET boost the reliability and efficiency of inverters for photovoltaic applications. As the leader in high-efficiency technologies, we enable customers in realizing photovoltaic inverter efficiencies of more than 99%.



Features

- 1200V Coreless Transformer isolated Driver ICs
- Rail-to-rail outputs
- protection function

Products

- 1EDI30J12CP
- 1EDI30J12CL
- 1ED020I12-F2
- 1ED020I12-B2
- 1ED020I12-FT
- 1ED020I12-BT
- 2ED020I12-F2
- 2ED020I12-FI

Applications

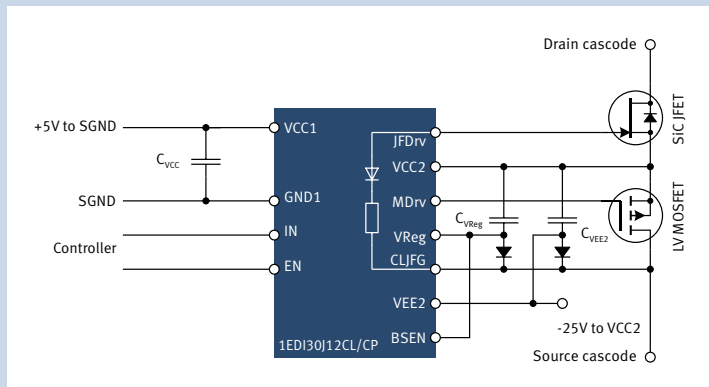
- Solar
- UPS



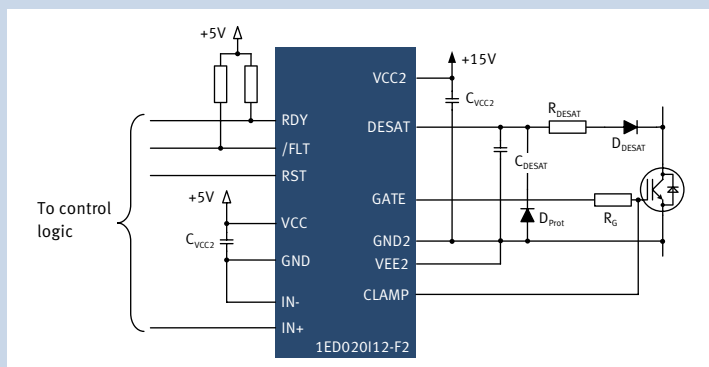
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Infinion Direct Drive Technology



Typical usage of Single-Channel driver 1ED020I12-F2/-B2



Detailed product features



Product Type	Package		Topology	Voltage Class [V]	Io+ / Io- [mA]	Turn On Propagation Delay (max) [ns]	Tj(max) [°C]	UVLO ON max [V]	Fault Reporting	Shutdown /Enable	
	Type	Green									Halogen-Free
1EDI30J12CL	DSO-16	✓	✓	DirectDrive	1200	3000 / 3000	80	150	-17,2	-	EN
1EDI30J12CP	DSO-19	✓	✓	DirectDrive	1200	3000 / 3000	80	150	-17,2	-	EN
1ED020I12-F2	DSO-16	✓	✓	Single	1200	2000 / 2000	195	150	12,6	DESAT	/RST
1ED020I12-B2	DSO-16	✓	✓	Single	1200*	2000 / 2000	195	150	12,6	DESAT	/RST
1ED020I12-FT	DSO-16	✓	✓	Single	1200	2000 / 2000	2000	150	12,6	DESAT	/RST
1ED020I12-BT	DSO-16	✓	✓	Single	1200*	2000 / 2000	2000	150	12,6	DESAT	/RST
2ED020I12-F2	DSO-36	✓	✓	Dual	1200	2000 / 2000	195	150	12,6	DESAT	/RST
2ED020I12-FI	DSO-18	✓	✓	Half Bridge	1200	1000 / 2000	105	150	13,5	-	/SD

* Power loss considerations to be done by customer based on power switch selection

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