

RF MOSFET Gate Driver IC



The DEIC 420 ultra-fast high current driver is optimized to drive DEI DE-Series MOSFETs for high efficiency performance in RF generators, laser diode drivers, pulse generators, and high frequency power conversion applications. It is designed to switch power MOSFETs with

minimum switching times at frequencies to 45 MHz. The innovative DEIC 420 is manufactured in DEI's patented low-inductance RF package, offering superior thermal performance and high continuous operating frequencies.

Features

- Wide operating voltage range from 8 V to 30 V
- Very low output impedance
- No internal cross conduction which allows operating frequencies to 45 MHz
- Latch-up protected to rated reverse current
- Output Current - up to 20 A peak
- Very low thermal impedance
- Matched rise and fall times
- Evaluation Board available

Applications

- Class D and E RF Generators
- Laser Diode Drivers
- High Frequency Power Factor Correction
- Acoustic Transducer Drivers
- High Frequency SMPS
- Pulse Generators

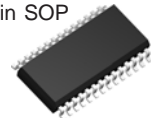
Fig. D1
DE 150



Fig. D2
DE 275



X550
28-pin SOP



MOSFET Driver ICs

Part Number	Configuration	t _{on} /t _{off} ns	Logic	Peak I A	Z _{out} Ω	Package	PD W	Enable Pin	Kelvin Input	Evaluation Board
DEIC420	SINGLE	3/4	Non-Inv	20	0.6	DE275	100	NO	NO	EVIC420A/B
DEIC421	SINGLE	3/4	Non-Inv	20	0.6	DE275-IC	100	NO	YES	
DEIC515	SINGLE	3/4	Non-Inv	15	0.6	DE150-IC	100	NO	YES	
IXDD415SI	DUAL	3/4	Non-Inv	15	0.8	SOIC-28 w/heat slug	12	YES	YES	EVDD415

Outline drawings
see pages O-29

Laser Diode Driver IC

Part Number	Pulse Width	Max Freq.	Peak I A	Package	Evaluation Board
IXLD02SI	1.5nS to >1μS	17MHz	2	SOIC-28 w/heat slug	EVL02

Evaluation Boards

Part Number	Configuration
EVDD415	IXDD415SI for DE Series
EVIC420A	DEIC420 for DE150/275
EVIC420B	DEIC420 for DE375/475

Driver and MOSFET

Part Number ▶ New	t _{ON} /t _{OFF} ns	Logic	BV _{dss} V	Peak I A	Z _{out} Ω	Package	PD W	Kelvin Input
▶ IXZ4DF08N120	4/4	NI DRIVER	1200	8	0.6	4DF	500	YES
▶ IXZ4DF12N100	4/4	NI DRIVER	1000	12	0.4	4DF	500	YES
▶ IXZ4DF18N50	4/4	NI DRIVER	500	18	0.325	4DF	500	YES