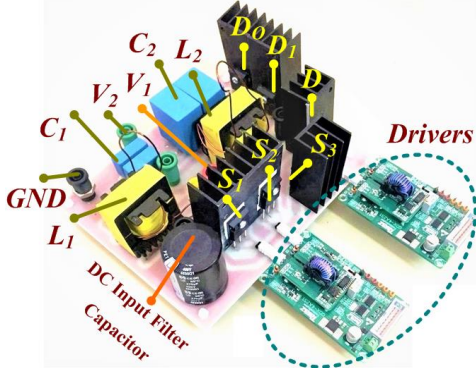


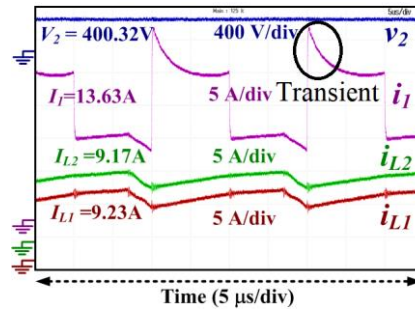
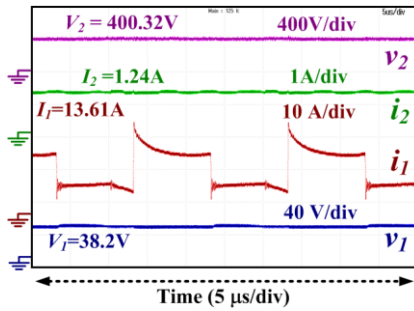
Sanjeevikumar Padmanaban

A sample of the Laboratory hardware prototype and findings are shown below:

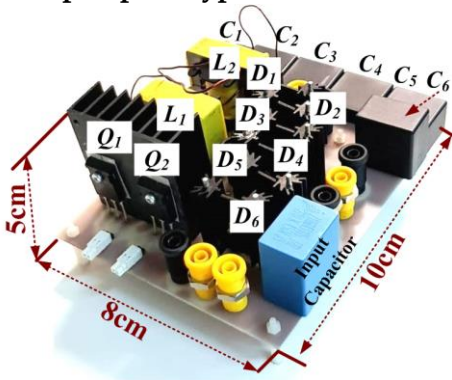
Designed prototype of Double Duty converter with 500W power.



Parameter	Value
Output and Input voltage	400V and 38 V
duty ratio*	$d_1=50\%$ and $d_2=35\%$
Inductors L_1	500 μ H
Capacitors C_1	100 μ F/50 V
Capacitors C_2	100 μ F/450 V
Diodes D, D_1, D_2	STTH30R04
Switches (MOSFET)	FDP19N40
Pulse generation	FPGA
Gate driver	GDX-4A2S1



Developed prototype of 6Nx Interleaved converter with power 500W:



Parameters	Values
Input voltage	20 V
Output voltage	-300 V
Output Power	300 W
Number of levels	6
Inductors	200 μ H, 20A, $R_L=80$ m Ω
Capacitors	15 μ F, 160V, ESR=4m Ω
Input capacitor	22 μ F, 100V
Switching frequency	50 kHz
MOSFET	FQH44N10, ($R_s = 0.039\Omega$)
Diodes	SDUR3020W, ($V_{DF}=0.95$)
Sensor	LEM LV 20-P

