

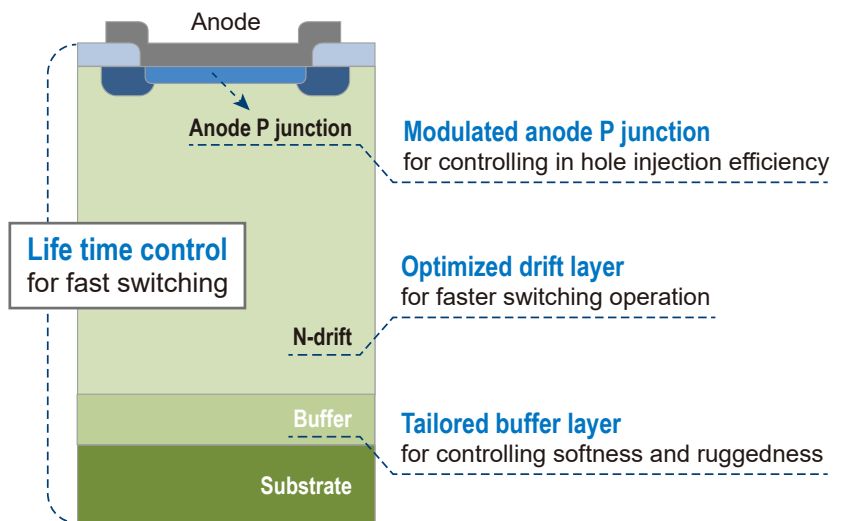
High Voltage FRED

Best Trade-Off Performance FRED for Maximizing System Efficiency



► Features

- Best trade-off on V_f & T_{rr}
- Low leakage current
- Soft recovery characteristic for better EMI
- Best efficiency achievable
- Best combination with power switches



► Target Application

Consumer



- Home Appliance
- Digital TV

Power System



- PSU for Network
- Server Power
- Data Center
- PC Power

Green Energy



- PV Inverter
- ESS / BMS

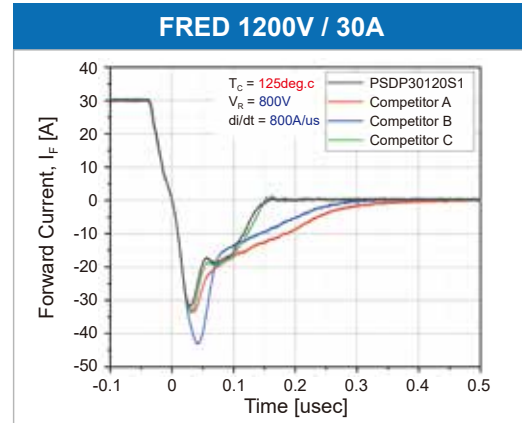
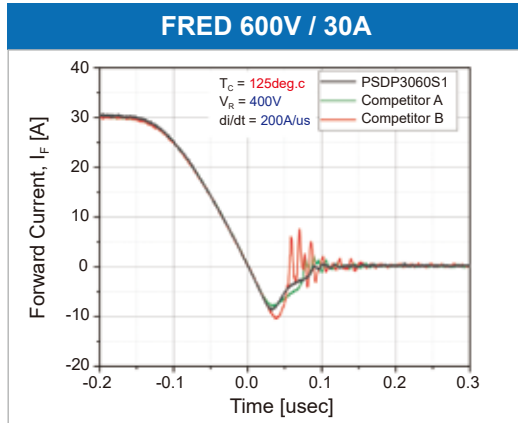
Industrial



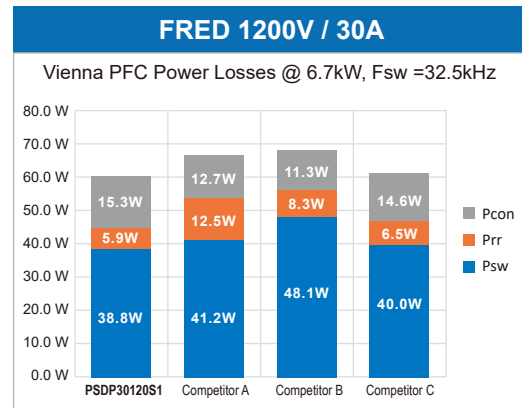
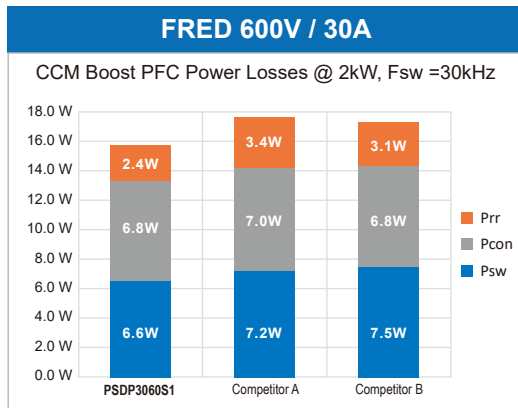
- UPS
- Welder
- Industrial Motor

► Performance

Reverse recovery characteristics



Power Loss Simulation



► FRED Line-Up

Optima FRED (Low V_f) : Minimize Conduction Loss

Speedy FRED (Low T_{rr}) : Minimize Switching Loss

Series	BV (V)	I_f (A)	V_f Typ. (V)	T_{rr} Typ. (ns)					
					TO-220AC	ITO-220AC	TO-263	TO-247-2LD	TO-247-3LD
600V FRED Optima (Low V_f)	600	8	1.3	60	PSDP0860L1	PSDF0860L1	PSDB0860L1		
		15	1.3	70	PSDP1560L1	PSDF1560L1	PSDB1560L1		
		30	1.3	75	PSDP3060L1	PSDF3060L1	PSDB3060L1	PSDH3060L1	
			1.3	70					PSDH3060CCL1
		60	1.25	135				PSDH6060L1	
		1.3	75					PSDH6060CCL1	
600V FRED Speedy (Low T_{rr})	600	8	1.8	35	PSDP0860S1	PSDF0860S1	PSDB0860S1		
		15	1.8	42	PSDP1560S1	PSDF1560S1	PSDB1560S1		
		30	1.8	45	PSDP3060S1	PSDF3060S1	PSDB3060S1	PSDH3060S1	
			1.8	42					PSDH3060CCS1
		60	1.65	55				PSDH6060S1	
		1.8	45					PSDH6060CCS1	
1000V FRED Speedy (Low T_{rr})	1000	30	2.65	95				PSDH30100S1	
1200V FRED Optima (Low V_f)	1200	8	2.1	70	PSDP08120L1				
		15	2.1	105	PSDP15120L1				
		30	2.1	160	PSDP30120L1				PSDH30120L1
		60	2.0	220				PSDH60120L1	
1200V FRED Speedy (Low T_{rr})	1200	8	3.0	45	PSDP08120S1				
		15	3.0	70	PSDP15120S1				
		30	3.0	135	PSDP30120S1				PSDH30120S1
		60	2.7	170				PSDH60120S1	