

# MID-VOLTAGE MOSFET TECHNOLOGY

## Fairchild's Offering

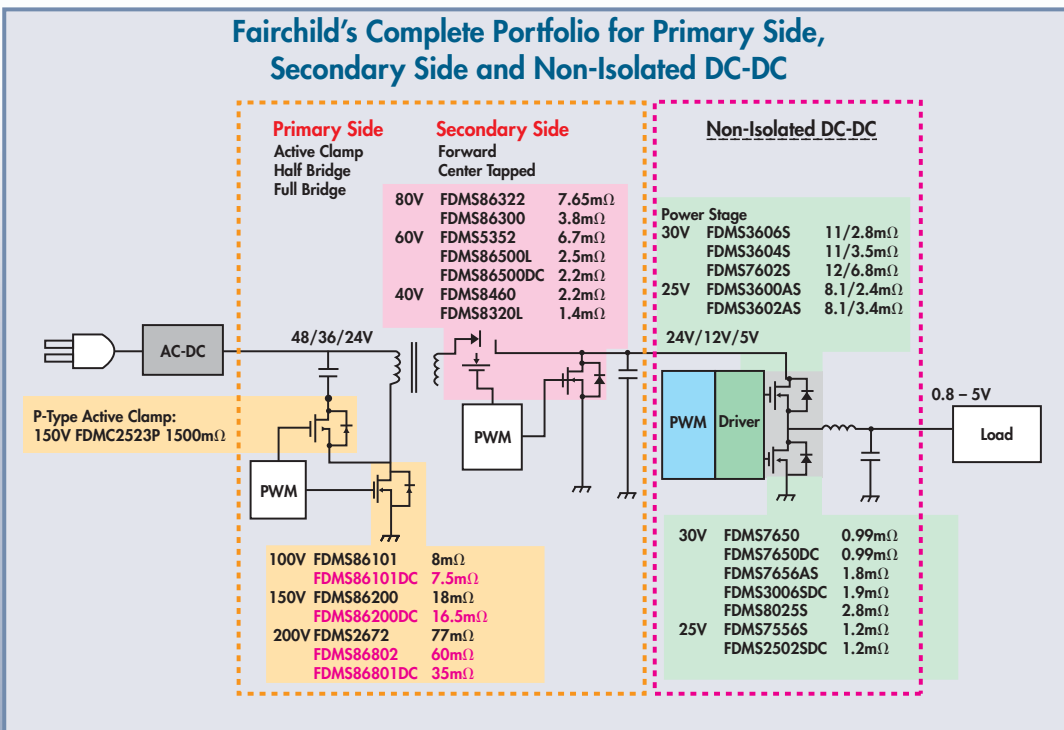
If you need increased output power in space-constrained systems, look to Fairchild Semiconductor for its mid-voltage MOSFET technology that enables higher power density and high efficiency solutions. Advanced silicon and packaging technology are combined to provide the lowest  $R_{DS(ON)}$  available, improved Figure of Merit (FOM), and lower power dissipation to meet challenging efficiency standards. Fairchild's PowerTrench® MOSFETs with shielded-gate technology results in very low switching losses without requiring external snubbers in most applications.

## Features

- Lowest  $R_{DS(ON)}$  2.5mΩ max. (60V  $BV_{DSS}$ )
- Reduced  $Q_{GD}$ : low switching loss using Fairchild's proprietary shielded-gate technology
- Superior switching performance
- Low switching noise
- Low ringing: no external snubber required in most applications
- Power56 (5mm x 6mm) thermally-enhanced, industry standard package

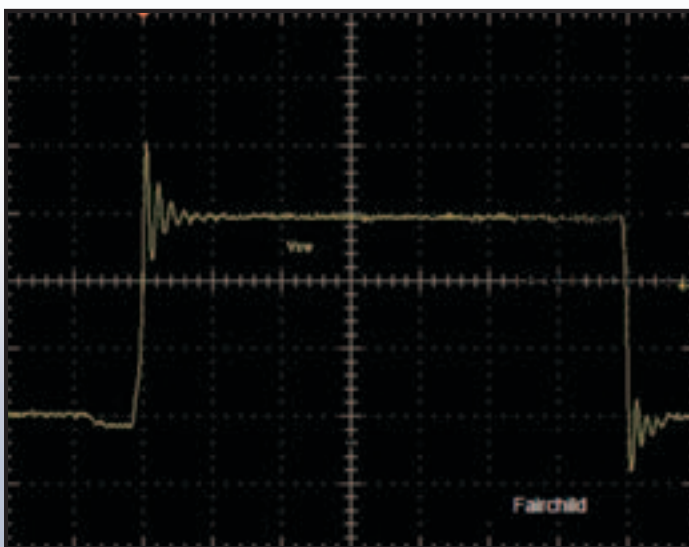
## Applications

- DC-DC power supplies (primary and secondary sides)
- Synchronous rectifiers
- Motor control switches
- Load switches
- Solar inverter switches

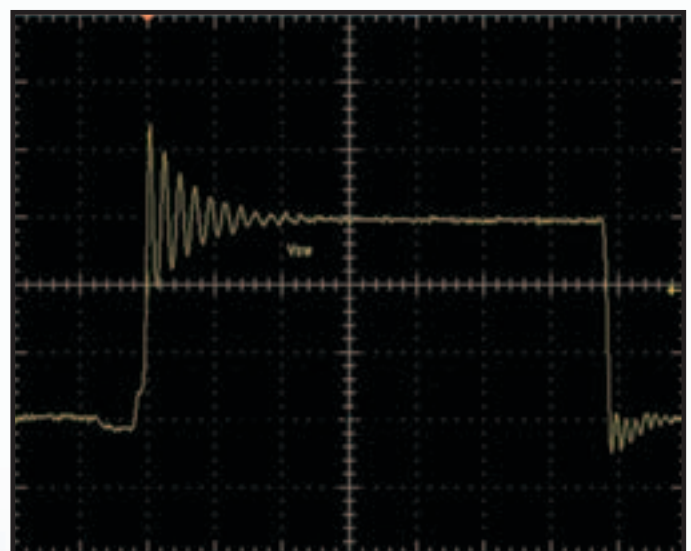


Product Number	BV <sub>DSS</sub> (V)	ID (A)	R <sub>DS(ON)</sub> Max (mΩ)		Qg (nC)		pF C <sub>oss</sub>	Previous Generation	Package
			10V	6V	Qg (nC)	Qgd			
FDMS8320L*	40	32	1.5	2.1	56	13	1554	FDMS8460	Power56
FDMC8321L*	40	21	3.5	5	20	5	555	FDMC8462	Power33
FDMS86500L	60	25	2.5	4.2	54	11.4	1470	FDMS5352	Power56
FDMC86520L*	60	13	8.2	11.7	21	5	452	-	Power33
FDMS86300	80	21.5	3.8	7.2	46	16	1397	FDMS86322	Power56
FDMS86101	100	12.4	8	13.5	39	10.8	460	FDMS3672	Power56
FDMC86102	100	7	24	38	13	3.6	175	-	Power33
FDS86140	100	11.2	9.8	16	29	6.5	440	FDS3672	SO8
FDMS86201	120	11.6	11.5	14.5	32	7.1	322	-	Power56
FDMS86200	150	9.6	18	21	33	7.7	203	FDMS2572	Power56
FDMC86240	150	4.6	51	70	11	2.3	79	-	Power33
FDS86240	150	7.5	19.8	26	28	5.3	198	FDS2572	SO8
FDD86250	150	8	22	31	23	4.7	167	FDD2572	DPAK
FDMS2672	200	3.7	77	88	30	8	95	-	Power56
FDMC2610	200	2.2	200	215	12.3	3.6	41	-	Power33
FDMS2734	250	2.8	122	130	30	9	80	-	Power56

\* In Development



Devices with Fairchild's PowerTrench®  
MOSFET Shielded-Gate Technology



Competitor Devices