

200V Automotive-grade Hyper Fast Recovery Rectifiers

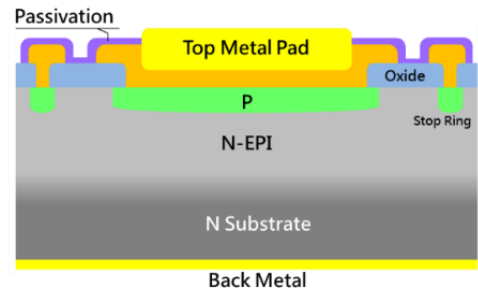
MER & MSR Series - High Efficiency & High Junction Temperature



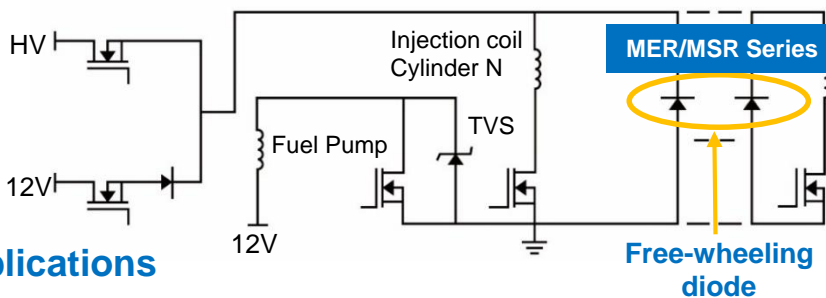
MER & MSR series are designed with the most advanced planar constructions to deliver faster reverse recovery time; which reduce switching loss while improving operating efficiency. The soft recovery characteristic further reduces EMI. With high junction temperature of 175°C, both series are aging-resistant. They are optimal for applications with high-temperature environments and require high-reliability.

► Features

- AEC-Q101 qualified*
- Planar construction
- Fast reverse recovery time (T_{rr})
- Low reverse recovery charge (Q_{rr})
- Low switching loss
- Low leakage current
- 175°C operating junction temperature



► Electronic Control Unit Application Circuit Example



► Target Applications



Power System

- Telecom Power
- Server Power
- PC Power



Automotive

- Engine Control Unit
- Oil & Water Pump
- Lighting System
- BMS



Industrial

- PV Control Unit
- LED Lighting
- UPS



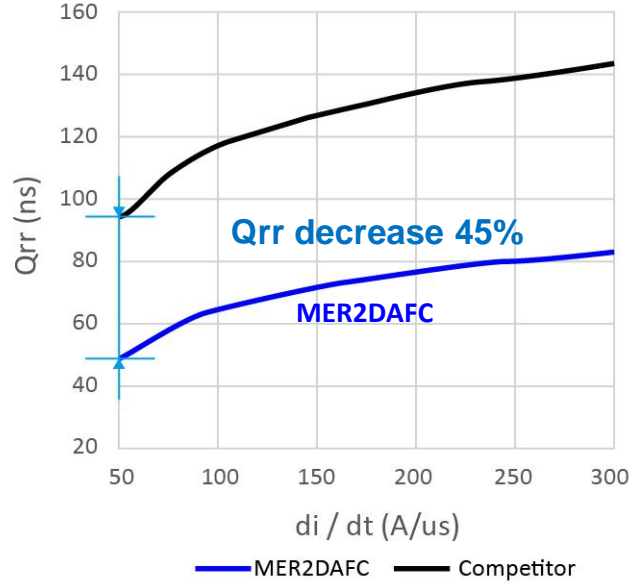
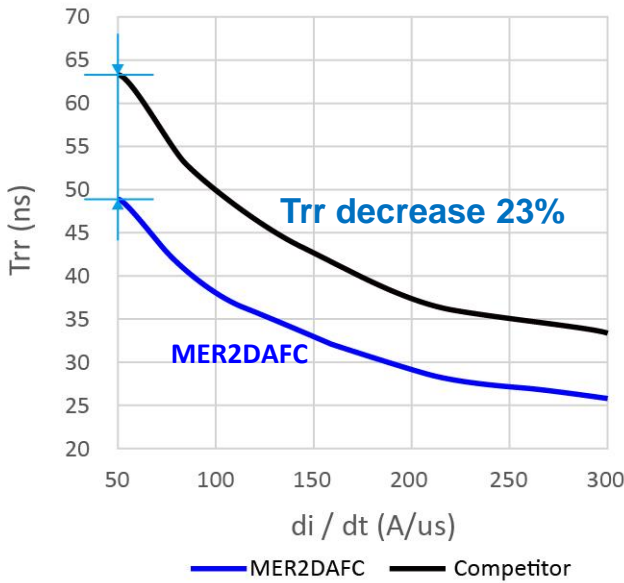
Consumer

- Home Appliance
- Lighting
- Router

*Product numbers ending in -AU are AEC-Q101 qualified. See the next page for full product list.

➤ Switching Performance

Test Condition : $I_F=2A$, $V_R=200V$, $T_J=125^\circ C$



➤ Products

VRRM	IF	VF	IR	Trr						
[V]	[A]	[V]	[μA]	[ns]	SOD-123FL	SOD-123HE	SMAF-C	SMBF	SMA	SMB
200	1	0.95@1A	1	20	MSR1DAL MSR1DAL-AU	MSR1DAH MSR1DAH-AU	MSR1DAFC MSR1DAFC-AU	-	MSR1DMA MSR1DMA-AU	MSR1DMB MSR1DMB-AU
	2	0.95@2A	1	20	MSR2DAL MSR2DAL-AU	MSR2DAH MSR2DAH-AU	MSR2DAFC MSR2DAFC-AU	-	MSR2DMA MSR2DMA-AU	MSR2DMB MSR2DMB-AU
	1	0.95@1A	1	35	-	MER1DAH MER1DAH-AU	MER1DAFC MER1DAFC-AU	-	MER1DMA MER1DMA-AU	MER1DMB MER1DMB-AU
	2	0.95@2A	1	35	MER2DAL MER2DAL-AU	MER2DAH MER2DAH-AU	MER2DAFC MER2DAFC-AU	MER2DBF MER2DBF-AU	MER2DMA MER2DMA-AU	MER2DMB MER2DMB-AU
	3	0.95@3A	1	35	-	MER3DAH MER3DAH-AU	MER3DAFC MER3DAFC-AU	MER3DBF MER3DBF-AU	MER3DMA MER3DMA-AU	MER3DMB MER3DMB-AU

VRRM	IF	VF	IR	Trr				
[V]	[A]	[V]	[μA]	[ns]	TO-220AC	ITO-220AC	TO-220AB	ITO-220AB
200	5/10	0.95@ 5A	1	35	MER502T	MER502FT	MER1002CT	MER1002FCT
	8/16	0.95@ 8A	1	35	MER802T	MER802FT	MER1602CT	MER1602FCT
	10/20	0.95@ 10A	1	35	MER1002T	MER1002FT	MER2002CT	MER2002FCT