



200 V TO 1200 V, 60 A TO 280 A ULTRAFAST DIODES

200 V to 1200 V, 60 A to 280 A Ultrafast FRED Pt[®] and HEXFRED[®] Diodes

Vishay offers a series of ultrafast diodes modules in the SOT-227 package with a wide range of current ratings and lower thermal resistance. Based on Vishay FRED Pt[®] and HEXFRED[®] ultrafast diodes, these modules provide ultrasoft recovery characteristics with higher thermal efficiency versus previous generations.

FEATURES

- Wide range of current ratings: 60 A to 280 A
- Voltage: up to 1200 V
- Low thermal resistance
- Low reverse recovery times
- Anti-parallel diodes and single-phase bridges available
- Electrically-isolated baseplate
- Low forward voltage drop
- FRED Pt[®] and HEXFRED[®]
- $T_j = 175\text{ °C}$ for FRED Pt[®]
- V_F / t_{rr} trade-off can be customized based on specific application requirements

BENEFITS

- Easy to use and parallel
- Low profile package
- Lower thermal resistance compared to previous generation
- Due to its flexibility, this package allows several user-level configurations and is suitable for many different applications
- Used with Vishay IGBT SOT-227 modules, it is possible to design a full converter using SOT-227 modules only
- FRED Pt[®] and HEXFRED[®] provide ultrasoft recovery current shape

APPLICATIONS

- Welding machines (output rectification)
- Switch Mode Power Supplies (SMPS)
- DC/DC converters
- Motor controls
- Inverters
- EV charging stations (high frequency output rectification)

Device	V_{RRM} (V)	$I_{F(AV)}$ at T_c		Typ t_{rr} at 25 °C (ns)	Notes
		(A)	(°C)		
VS-UFB80FA20	200	80	129	34	
VS-UFB130FA20	200	130	126	42	
VS-UFB280FA20	200	280	100	34	
VS-UFH280FA30	300	280	81	58	New Release
VS-UFB80FA40	400	80	121	68	
VS-UFB130FA40	400	130	114	86	
VS-UFB201FA40	400	200	86	80	
VS-UFB280FA40	400	280	90	93	
VS-UFB310CB40 ⁽¹⁾	400	310	119	89	
VS-UFB80FA60	600	80	104	79	
VS-UFL80FA60	600	80	115	115	
VS-UFB130FA60	600	130	92	79	
VS-UFL130FA60	600	130	98	105	
VS-HFA140FA60	600	140	110	90	
VS-UFB230FA60	600	230	88	83	
VS-UFL230FA60	600	230	102	104	
VS-UFB250FA60	600	250	113	166	
VS-UFL250CB60 ⁽¹⁾	600	250	119	104	
VS-UFH60BA65	650	60	123	63	Single-Phase Bridge, New Release
VS-HFA70FA120	1200	70	94	134	
VS-HFA70EA120	1200	70	121	145	
VS-HFA90FA120	1200	90	63	80	
VS-HFA140FA120	1200	140	74	145	
VS-HFA220FA120	1200	220	68	157	

(1) Not Isolated

Samples available for all products