

High Quality FRED for UPS Systems

Attractive FRED Devices for High Efficiency and Power Availability



Uninterruptible Power Supplies (UPS) are an effective way of achieving reliable power supply, which ensure reliable voltage supply for critical applications. In addition, they are also obliged to fulfill legislative requirements like power factor correction (PFC). PANJIT's FRED series are specifically designed for power factor correction(PFC), which provide Best Trade-off on V_F & T_{RR} and Soft Recovery Switching characteristics that can be applied to AC/DC PFC control circuit, DC/AC Inverter circuit and DC/DC Push-Pull Converter of UPS. Moreover, it can reduce EMI noise and improve system efficiency.

► Uninterruptible Power Supplies(UPS) are used in many areas, such as

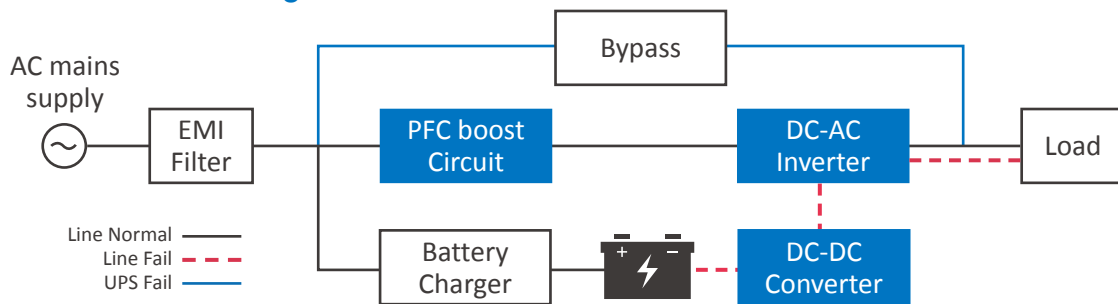
- Telecommunications
- Data centers
- Process supply in the chemical and petrochemical industries
- Aviation and air traffic control
- Power supply in hospital rooms and intensive care units

► Product Features

- Best trade-off on V_F & T_{RR}
- Soft recovery switching
- High efficiency
- High quality
- High junction temperature 175°C
- Low Reverse Recovery Charge
- Low Reverse Recovery Time
- Low Leakage Current

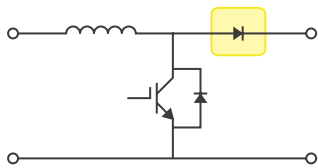


➤ On-line UPS Block Diagram

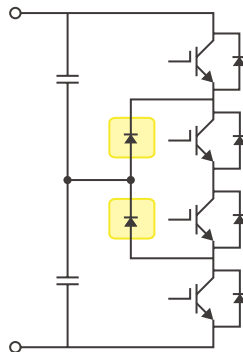


➤ FRED for UPS Block Circuit

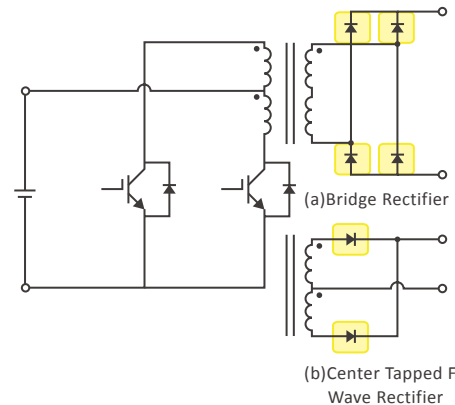
AC/DC PFC boost circuit:



DC/AC three-level neutral-point-clamped inverter circuit:



DC/DC Push-Pull Converter:



➤ Recommended Devices

V_{RRM} (V)	Series	Part Number	Current(A)	T_{RR} (ns) 1A,30V, 100A/us	V_F (V)	I_R (μ A)	Package
600	Standard Type	QR806/F	8	35	1.65	3	TO-220AC ITO-220AC
		QR1006/F	10	35	1.55	3	
		QR1506/F	15	35	1.65	3	
		QR3006*	30	45	1.8	5	
		QR6006P	60	50	1.8	5	TO-247AD 2L
	Low Trr Type	QRT8A06/F	8	20	2.4	1	TO-220AC ITO-220AC
		QRT10A06/F	10	20	2.4	1	
		QRT1506/F	15	25	2.35	3	
		QRT3006P	30	40	2.4	5	TO-247AD 2L
		QRT6006P	60	45	2.4	5	
1200	Low Trr Type	QRT8E12*	8	45	3.3	5	TO-220AC
		QRT15E12*	15	50	3.3	5	
		QRT30E12*	30	55	3.3	5	

* In development.

