



F20UP20DN

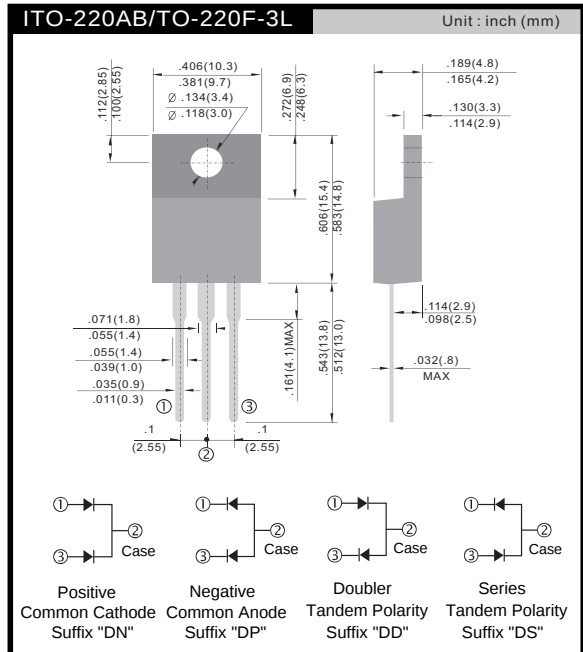
20Amperes,200Volts Insulated Common Cathode Ultra Fast Soft Recovery Epitaxial Diodes

APPLICATION

- Freewheeling, Snubber, Clamp
- Inversion Welder
- PFC
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- UPS

PRODUCT FEATURE

- Ultrafast Recovery Time
- Soft Recovery Characteristics
- 175 Operating Junction Temperature
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current



GENERAL DESCRIPTION

F20UP20DN using latest FRED FAB process(planar passivation pellet) with ultrafast soft recovery characteristics.

Absolute Maximum Ratings				
Parameter	Symbol	Test Conditions	Values	Units
Repetitive peak reverse voltage	V _{RRM}		200	V
Continuous forward current	I _{F(AV)}	T _c =110°C	20	A
Single pulse forward current	I _{FSM}	T _c =25°C	200	
Maximum repetitive forward current	I _{FRM}	Square wave, 20kHz	50	
Operating junction	T _j		175	°C
Storage temperatures	T _{stg}		-55 to +175	°C

Electrical characteristics (Ta=25°C unless otherwise specified)						
Parameter	Symbol	Test Conditions	Min	Typ.	Max.	Units
Breakdown voltage Blocking voltage	V_{BR} , V_R	$I_R=100\mu A$	200			V
Forward voltage (Per Diode)	V_F	$I_F=10 A$		0.88	0.96	
		$I_F=10 A$, $T_j=125^\circ C$		0.75	0.86	
Reverse leakage current(Per Diode)	I_R	$V_R=V_{RRM}$			10	μA
		$T_j=150^\circ C$, $V_R=200V$			100	
Reverse recovery time(Per Diode)	t_{rr}	$I_F=0.5A$, $I_R=1A$, $I_{RR}=0.25A$		25	35	ns
		$I_F=1A$, $V_R=30V$, $di/dt=200A/us$		17	30	

Thermal characteristics

Paramter	Symbol	Typ	Units
Junction-to-Case	$R_{\theta JC}$	2.0	$^\circ C/W$

Electrical performance (typic)

