



Micro Commercial Components  
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# UFT14005 THRU UFT14060

## Features

- Supre Fast switching for high efficiency
- High Surge Capability
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability

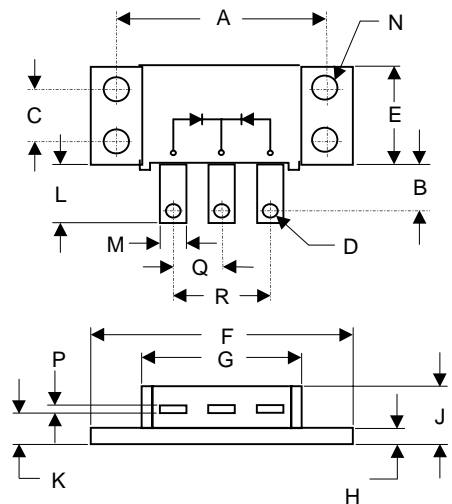
## 140 Amp Supre Fast Recovery Rectifier 50 to 600 Volts

## Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
UFT14005	50V	35V	50V
UFT14010	100V	70V	100V
UFT14020	200V	40V	200V
UFT14040	400V	280V	400V
UFT14060	600V	420V	600V

## POWERMOD



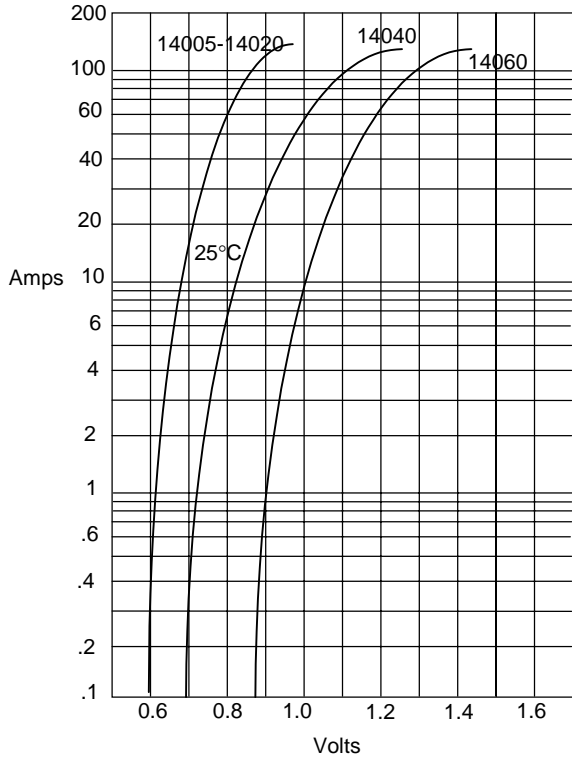
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	140 A	$T_C = 115^\circ\text{C}$
Peak Forward Surge Current 14040 14060	$I_{FSM}$	1000A 800 A 700 A	8.3ms, half sine
Maximum Instantaneous Forward Voltage 14005-14020 14040 14060	$V_F$	0.975V 1.25V 1.35V	$I_{FM} = 70.0\text{A};$ $T_J = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5 $\mu\text{A}$ 6mA	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$
Maximum Reverse Recovery Time 14005-14020 14040 14060	$T_{rr}$	60ns 75ns 90ns	$I_F=0.5\text{A}, I_R=1.0\text{A},$ $I_{rr}=0.25\text{A}$
Typical Junction Capacitance 14005-14020 14040 14060	$C_J$	575pF 300pF 275pF	Measured at 1.0MHz, $V_R=10\text{V}$

DIM	DIMENSIONS				NOTE
	INCH		MM		
	MIN	MAX	MIN	MAX	
A	1.995	2.005	50.67	50.93	
B	.330	.325	7.62	8.26	
C	.495	.505	12.57	12.83	
D	.182	.192	4.62	4.88	∅
E	.990	1.010	25.12	25.65	
F	2.390	2.410	60.71	61.21	
G	1.500	1.525	38.10	38.70	
H	.120	.130	3.05	3.30	
J	-----	.400	-----	10.16	
K	.240	.260	6.10	6.60	
L	.490	.510	12.45	12.95	
M	.330	.350	8.38	8.90	
N	.175	.195	4.45	4.95	∅
P	.035	.045	0.89	1.14	
Q	.445	.455	11.30	11.56	
R	.890	.910	22.61	23.11	

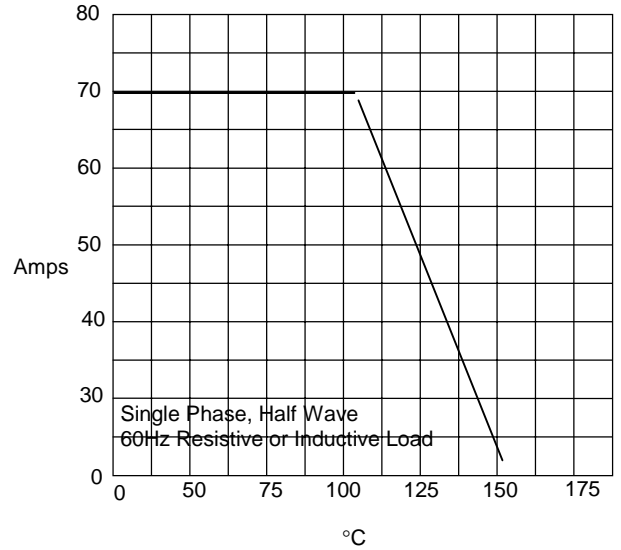
\*Pulse Test: Pulse Width 300 $\mu\text{sec}$ , Duty Cycle 2%

Figure 1  
Typical Forward Characteristics



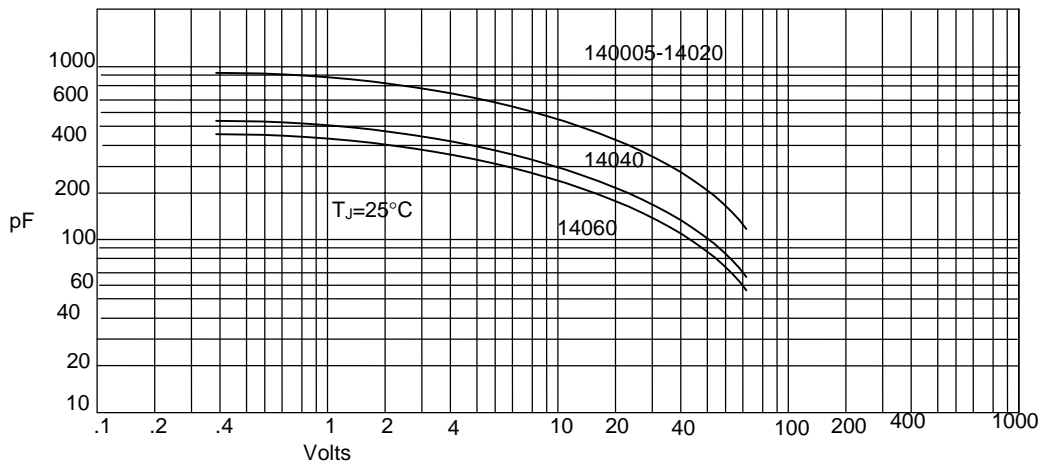
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus  
Case Temperature - °C

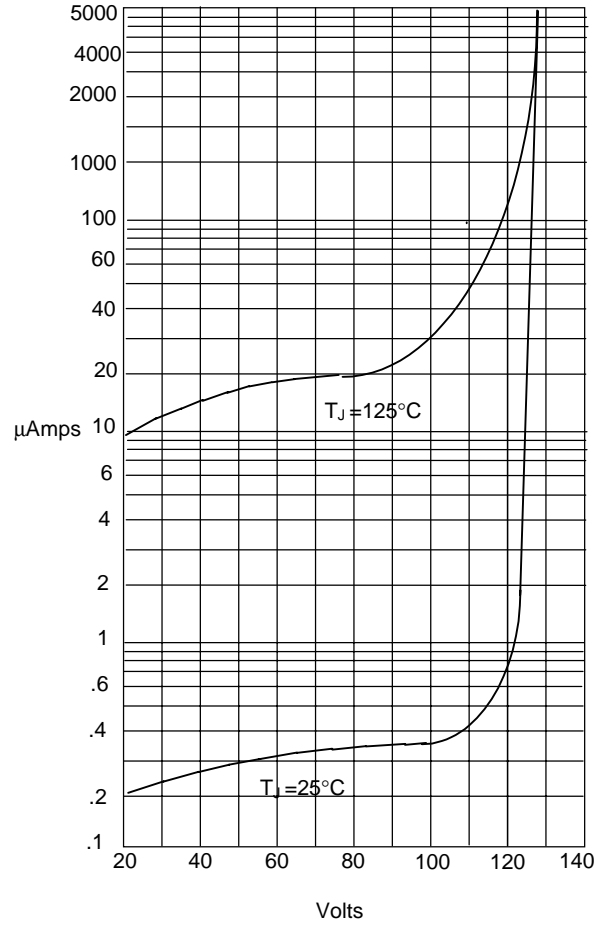
Figure 3  
Junction Capacitance



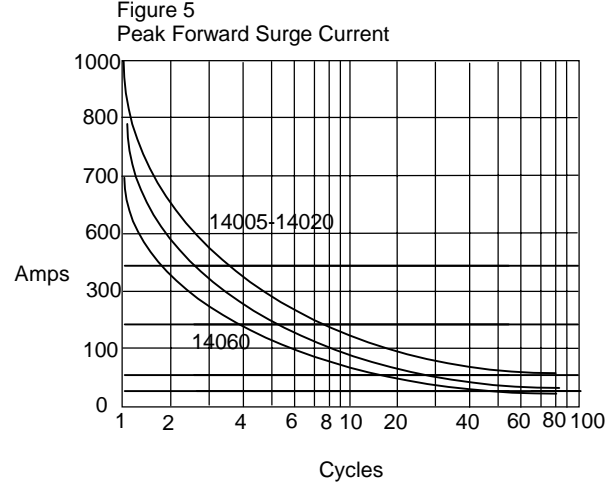
Junction Capacitance - pF versus  
Reverse Voltage - Volts



Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes versus Percent Of Rated Peak Reverse Voltage - Volts



Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles