

TO-220F Plastic-Encapsulate Diodes

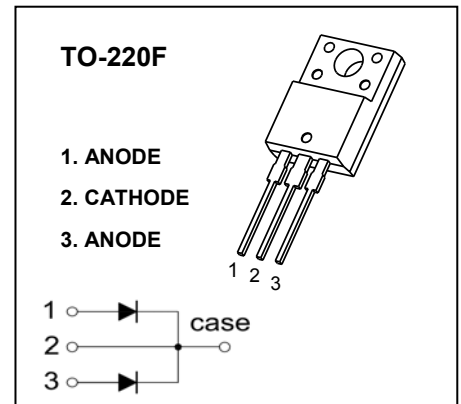
MUR1660FCT SUPER FAST RECOVER RECTIFIER

FEATURES

- Ultrafast 35ns Recovery Times
- High Voltage Capability to 600V
- Low Reverse Leakage Current

APPLICATIONS

- The state-of-the-art device are a series designed for use in switching power supplies, inverters and as free wheeling diodes.
- Use in the output rectification stage of SMPS, UPS, DC/DC converters as well as free wheeling diode in low voltage inverters and choppermotor drives.



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

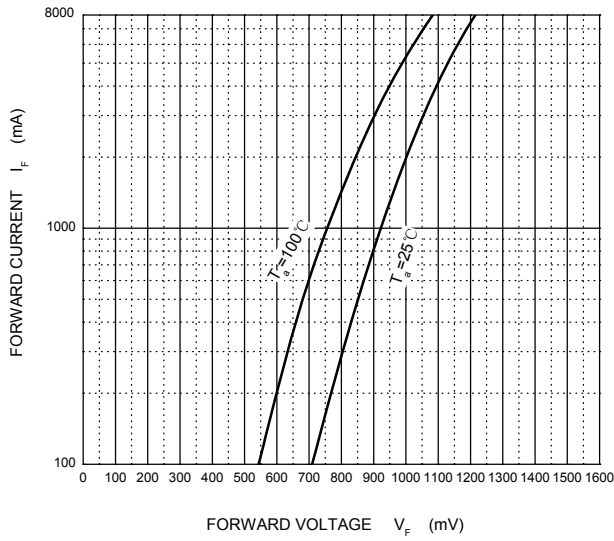
Symbol	Parameter	Value	Unit
V_{RRM}	Peak repetitive reverse voltage	600	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	420	V
I_o	Average rectified output current@ Per leg	8	A
	Average rectified output current@ Total device	16	A
I_{FSM}	Non-Repetitive peak forward surge current 8.3ms half sine wave	100	A
P_D	Power dissipation	2	W
$R_{\theta JA}$	Thermal resistance from junction to ambient	50	$^\circ\text{C}/\text{W}$
T_j	Junction temperature	125	$^\circ\text{C}$
T_{stg}	Storage temperature	-55~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

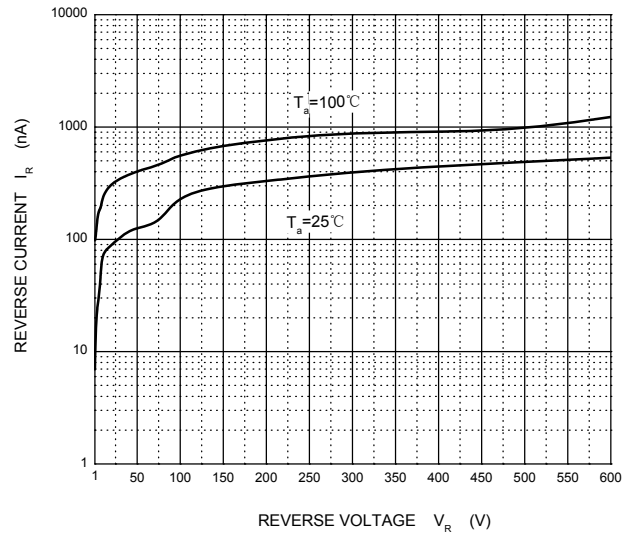
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	600			V
Reverse current	I_R	$V_R=600\text{V}$			1	μA
Forward voltage	V_F	$I_F=8\text{A}$			1.6	V
Typical total capacitance	C_{tot}	$V_R=0\text{V}, f=1\text{MHz}$		80		pF
Reverse recovery time	t_{rr}	$I_F=0.5\text{A}, I_R=1\text{A}, I_{tr}=0.25\text{A}$		24	35	ns

Typical Characteristics

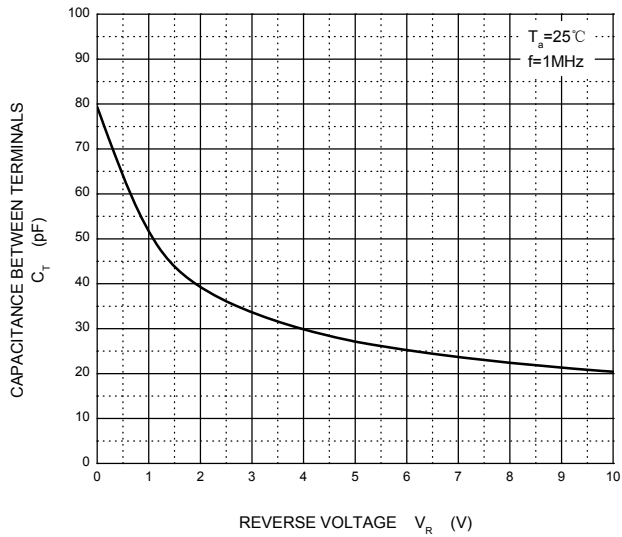
Forward Characteristics



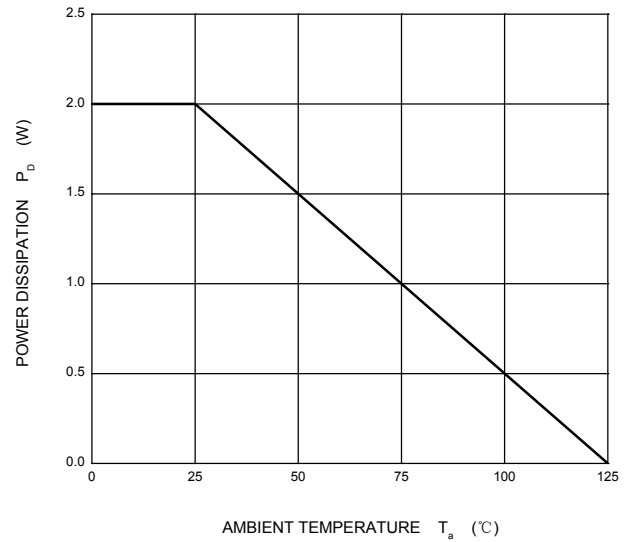
Reverse Characteristics



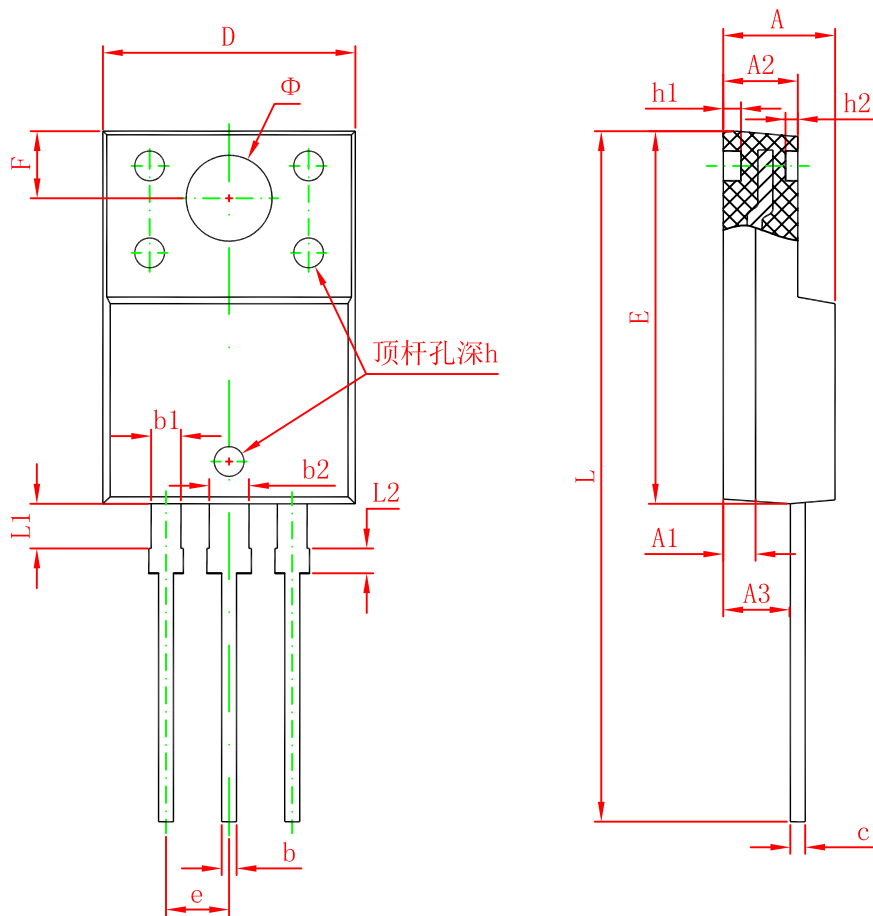
Capacitance Characteristics



Power Derating Curve



TO-220F Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.300	4.700	0.169	0.185
A1	1.300 REF.		0.051 REF.	
A2	2.800	3.200	0.110	0.126
A3	2.500	2.900	0.098	0.114
b	0.500	0.750	0.020	0.030
b1	1.100	1.350	0.043	0.053
b2	1.500	1.750	0.059	0.069
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
Φ	3.500 REF.		0.138 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	1.700	1.900	0.067	0.075
L2	0.900	1.100	0.035	0.043