UGRP20F

Ultra fast Plastic Rectifiers

VOLTAGE: 350V **CURRENT:20.0A**

GULF SEMI

FEATURE

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultra fast recovery time for high efficiency
- Excellent high temperature switching
- Glass passivated junction
- High voltage and high reliability
- High speed switching
- Low forward voltage

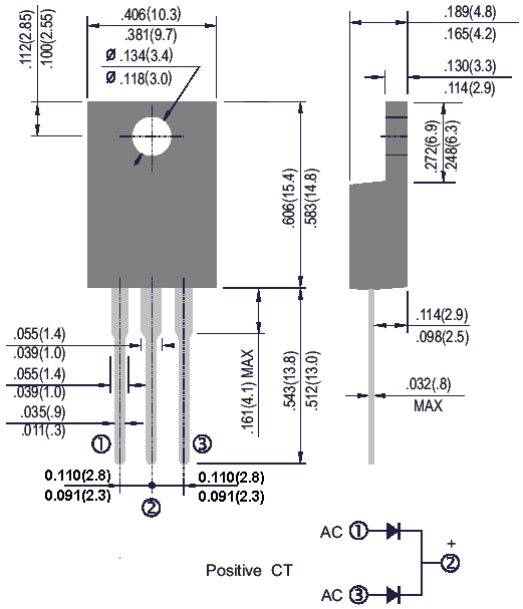
MECHANICAL DATA

Case: JEDEC ITO-220AB molded plastic body over passivated chip

Terminals: Plated Insert leads, solderable per MIL-STD-750, Method 2026

Mounting Position: Any

ITO-220AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

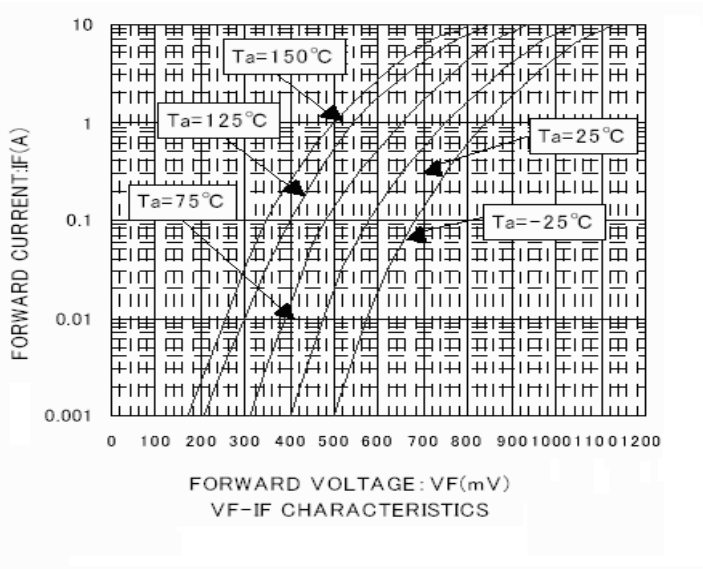
(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

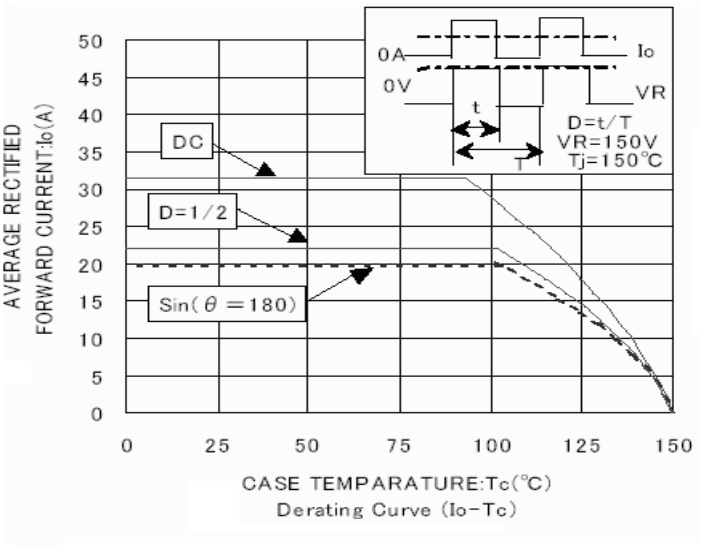
	SYMBOL	UGRP20F	units
Maximum Recurrent Peak Reverse Voltage	Vrrm	350	V
Maximum RMS Voltage	Vrms	245	V
Maximum DC blocking Voltage	Vdc	350	V
Maximum Average Forward Rectified at Tc =100°C	If(av)	20.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	Ifsm	100	A
Maximum Forward Voltage at Forward Current at 10A	Vf	1.3	V
Maximum Reverse Recovery Time (Note 1)	Trr	25	nS
Typical thermal resistance junction to case	Rth(jc)	5.0	℃/W
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =100°C	Ir	10 100	μA μA
Storage and Operating Temperature Range	Tstg, Tj	-55 to +150	°C

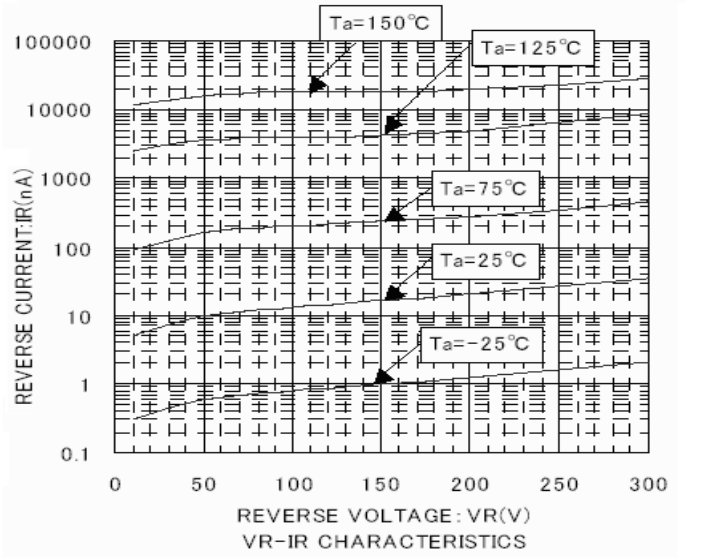
Note:

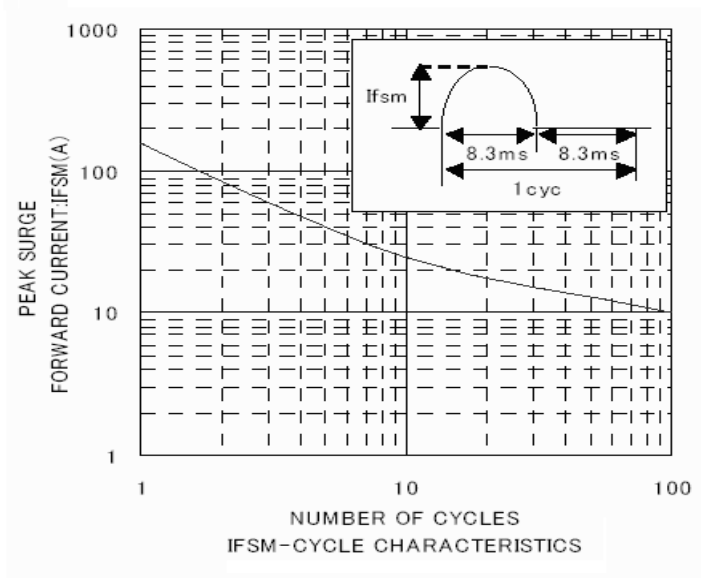
1. Reverse Recovery Condition If =0.5A, Ir =1.0A, Irr =0.25A

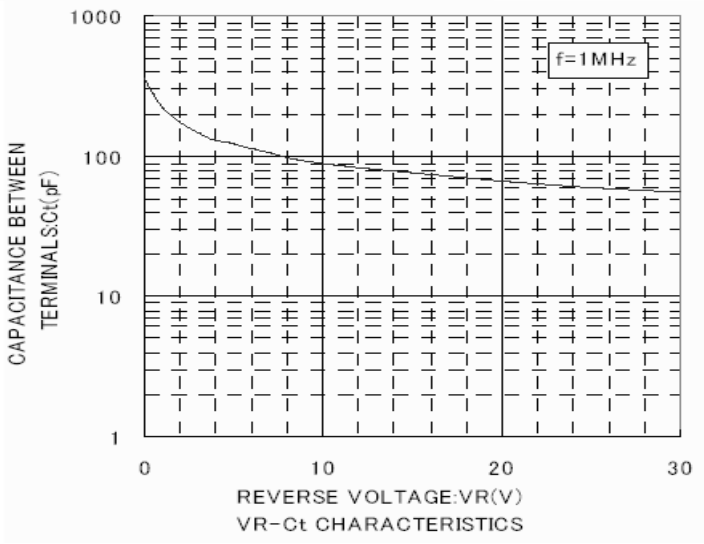
RATINGS AND CHARACTERISTIC CURVES UGRP20F


Ta=150℃
Ta=125℃
Ta=25℃
Ta=75℃
Ta=-25℃
FORWARD CURRENT:IF(A)
10
1
0.1
0.01
0.001
0 100 200 300 400 500 600 700 800 900 1000 1100 1200
FORWARD VOLTAGE:VF(mV)
VF-IF CHARACTERISTICS


0A
Io
0V
VR
t
T
D=t/T
VR=150V
Tj=150℃
DC
D=1/2
Sin(θ=180)
AVERAGE RECTIFIED FORWARD CURRENT:Io(A)
50
45
40
35
30
25
20
15
10
5
0
0 25 50 75 100 125 150
CASE TEMPARATURE:Tc(℃)
Derating Curve (Io-Tc)


Ta=150℃
Ta=125℃
Ta=75℃
Ta=25℃
Ta=-25℃
REVERSE CURRENT:IR(nA)
100000
10000
1000
100
10
1
0.1
0 50 100 150 200 250 300
REVERSE VOLTAGE:VR(V)
VR-IR CHARACTERISTICS


Ifsm
8.3ms
8.3ms
1cyc
PEAK SURGE FORWARD CURRENT:IFSM(A)
1000
100
10
1
1 10 100
NUMBER OF CYCLES
IFSM-CYCLE CHARACTERISTICS


f=1MHz
CAPACITANCE BETWEEN TERMINALS:Ct(pF)
1000
100
10
1
0 10 20 30
REVERSE VOLTAGE:VR(V)
VR-Ct CHARACTERISTICS