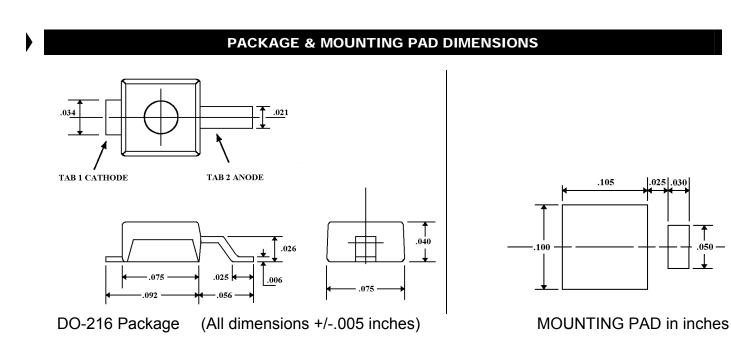


# **UPS120e3**

## 1.0 A Schottky Barrier Rectifier

Parameter	Symbol	Conditions	T <sub>J</sub> = 25°C	T <sub>J</sub> =85⁰C	Units
Maximum Forward Voltage (Note 1) See Figure 2	V <sub>F</sub>	I <sub>F</sub> = 0.1 A I <sub>F</sub> = 1.0 A I <sub>F</sub> = 3.0 A	0.34 0.45 0.65	0.25 0.415 0.67	V
Maximum Instantaneous Reverse Current (Note 1)	I <sub>R</sub>	V <sub>R</sub> = 20 V V <sub>R</sub> = 10 V	0.40 0.10	25 18	mA

Note: 1 Short duration test pulse used to minimize self - heating effect.



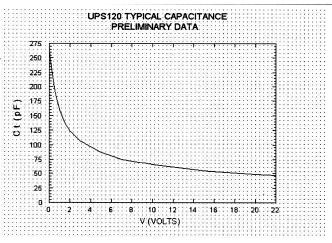
.050 -



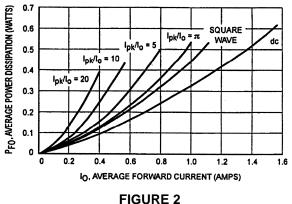
# UPS120e3

### 1.0 A Schottky Barrier Rectifier

#### **CHARTS AND GRAPHS**



**FIGURE 1** 



Forward Power Dissipation

\* Reverse power dissipation and the possibility of thermal runaway must be considered when operating this device under any reverse voltage conditions. Calculations of  $T_J$  therefore must include forward and reverse power effects. The allowable operating  $T_J$  may be calculated from the equation:

 $T_J = T_{J max} = r(t)(Pf+Pr)$  where r(t) = thermal impedance under given conditions. Pf = forward power dissipation, and Pr = reverse power dissipation

This graph displays the derated allowable  $T_J$  due to reverse bias under DC conditions only and is calculated as  $T_J = T_{J \text{ max}} r(t) Pr$ , Where r(t)=Rthja. For other power applications further calculations must be performed.

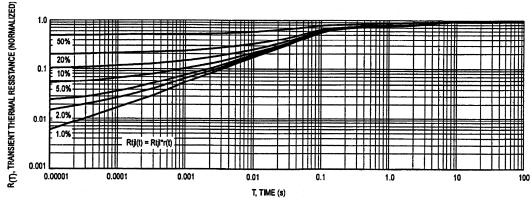
Downloaded from Arrow.com.

Microsemi



## UPS120e3

## 1.0 A Schottky Barrier Rectifier





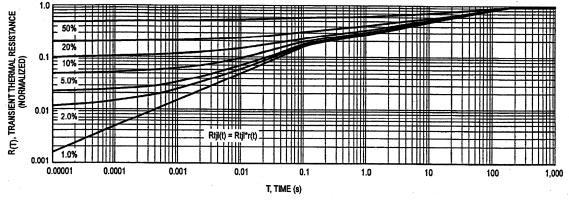


FIGURE 4 – Thermal Impedance Junction to Ambient