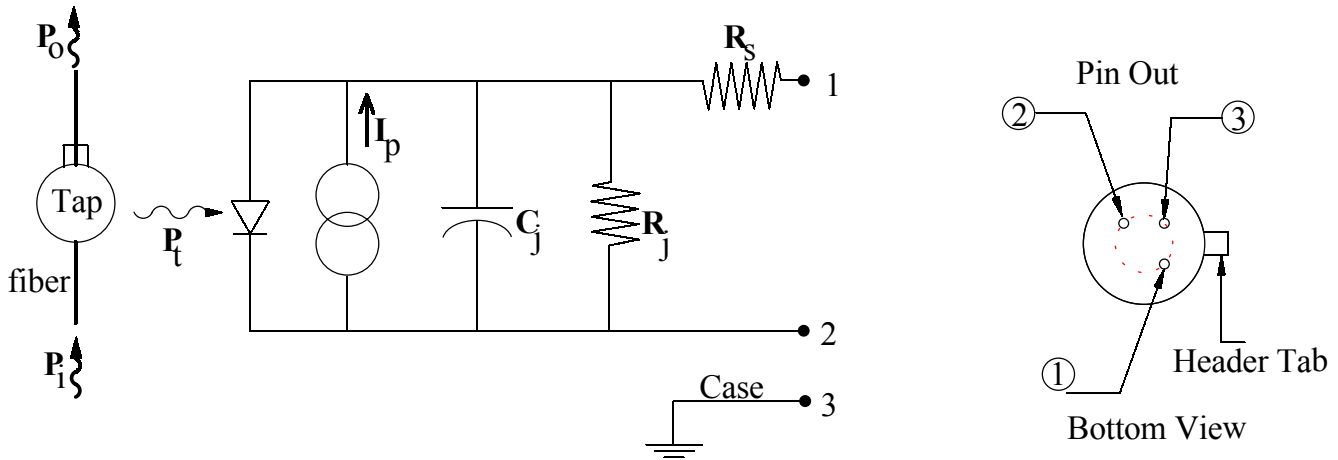


# SERIES 100 EQUIVALENT CIRCUIT AND PARAMETER DEFINITIONS



$P_i$  = input optical power (dBm)  
 $P_o$  = output optical power (dBm)  
 $P_t$  = tapped optical power (dBm)  
 $I_p$  = photocurrent (mA)

$C_j$  = photodiode junction capacitance (4pF, typical)  
 $R_j$  = photodiode shunt resistance (50 Mohm, typical)  
 $R_s$  = photodiode series resistance (10 ohm, typical)

Insertion Loss (dB) =  $P_i - P_o$

Effective Responsivity  $\left(\frac{\text{mA}}{\text{watt}}\right) = \frac{1000 \times I_p}{10^{\left(\frac{P_o}{10}\right)}}$

PDL (dB) =  $P_o^{\max} - P_o^{\min}$  for varying input SOP

Polarization Stability (dB) =  $10 \log \left[ \frac{I_p^{\max}}{I_p^{\min}} \right]$  for varying input SOP

Directivity (dB) =  $10 \log \left[ \frac{I_p^{\text{forward}}}{I_p^{\text{backward}}} \right]$

Where:  
 $I_p^{\text{forward}}$  = photocurrent with forward directed optical power  
 $I_p^{\text{backward}}$  = photocurrent with backward directed optical power

	DRAFTSMAN: TM Laferriere		
	TITLE: Series 100 Equivalent Circuit		
MATERIAL:	DWG NO: M100 Equivalent Circuit		
	SCALE	SHEET: 1 of 1	DATE: 12/12/02