

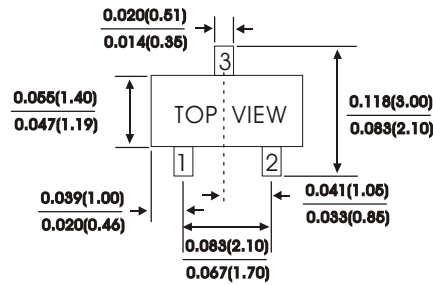
# IMBD4148

## SMALL SIGNAL SWITCHING DIODES

### SOT-23

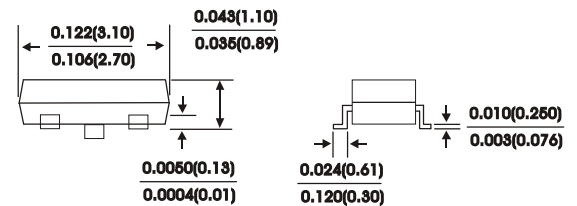
#### FEATURES:

- Silicon epitaxial planar diodes
- Fast switching diodes in case SOT-23, especially suited for automatic insertion



#### MECHANICAL DATA

Case: SOT-23 Plastic Package  
Weight: Approx. 0.08gram



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temp. unless otherwise specified.  
Single phase, half sine wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20 %.

Characteristic	Symbol	IMBD4148	Units
Maximum peak reverse voltage	$V_{RRM}$	100	Volts
Maximum reverse voltage	$V_R$	75	Volts
Average rectified current .half wave rectification with Resistive load at $T_a=25^\circ\text{C}$ And $F \geq 50\text{HZ}$	$I_{(AV)}$	0.15 <sup>1)</sup>	Amps
Peak forward surge current, <1S single half sine-wave auperimposed on ratedload $T_a=25^\circ\text{C}$	$I_{FSM}$	0.5	Amps
Power dissipation at $T_a=25^\circ\text{C}$	$P_{tot}$	500 <sup>1)</sup>	mW
Maximum instantaneous forward voltage drop per leg at 0.01A	$V_F$	1.0	Volts
Maximun leakage current	$I_R$	At $V_R = 20V$ 2.5	nA
		At $V_R = 75V$ 5.0	uA
Maximum Reverse recovery time	TRR	4	ns
Maximun junction capacitance $V_R=V_F=0V$	$C_J$	4	pF
Maximun Thermal resistance junction to ambient (NOTE 1 )	$R_{th JA}$	450 <sup>1)</sup>	K /W
Operating temperature range	$T_J$	150	°C
storage temperature range	$T_{stg}$	-55 to +150	°C


**NOTES:**

(1)Reverse recovery condition  $I_F=0.01A$  ,  $I_R =0.01A$  ,  $V_R=6V$  ,  $R_L=100\Omega$

1):Device on fiberglass0.059 in(1.5mm),copper leads0.012 in (0.3mm)

# RATINGS AND CHARACTERISTIC CURVES IMBD4148

## Device Marking

Item	Marking	Equivalent Circuit diagram
IMBD4148	A3	

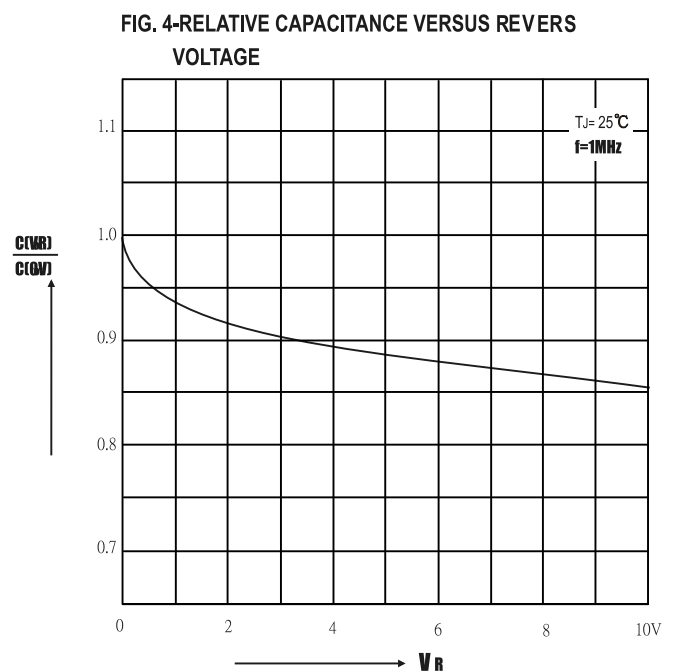
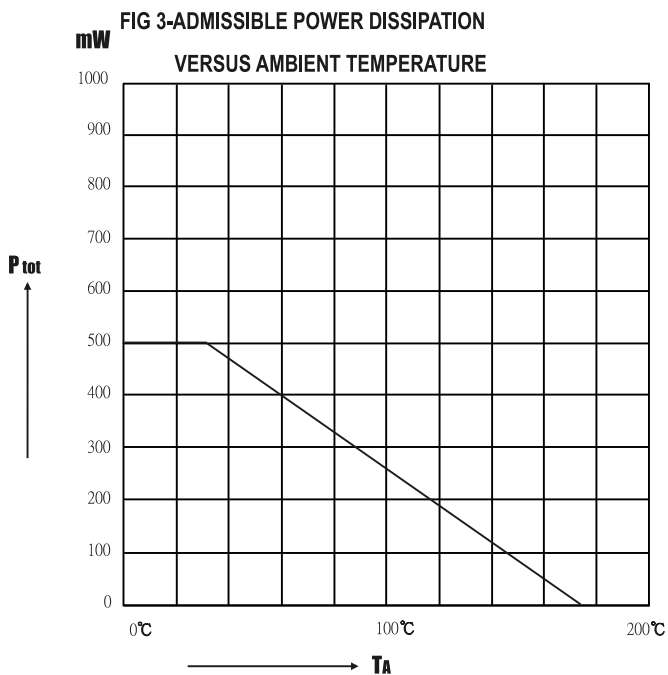
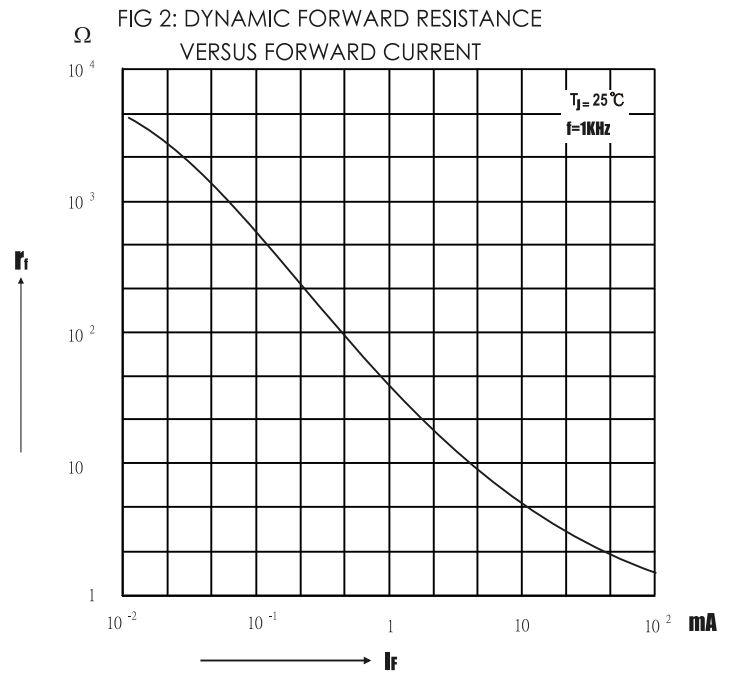
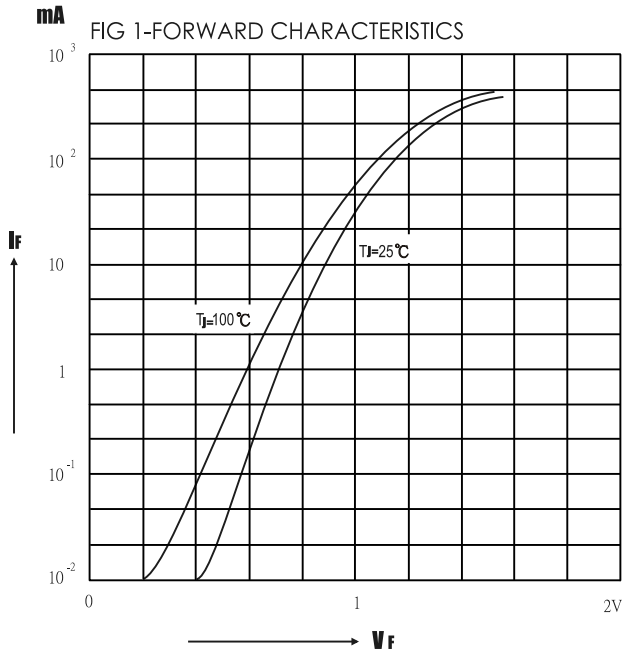


FIG 5: LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

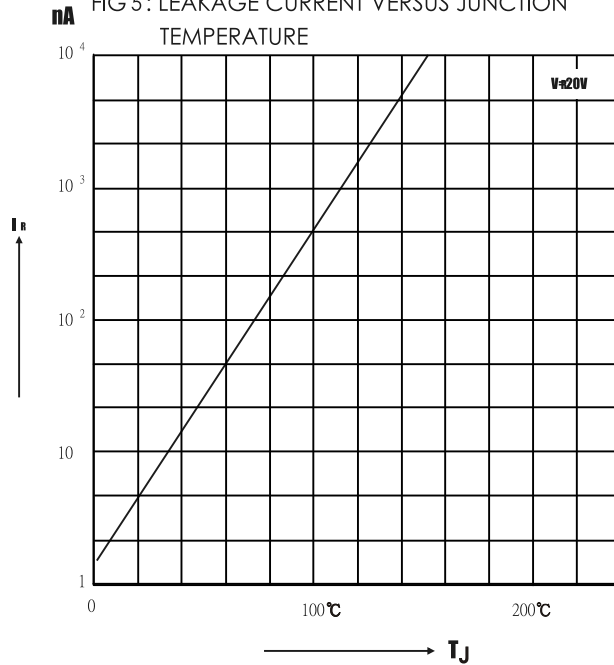


FIG 6: ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

