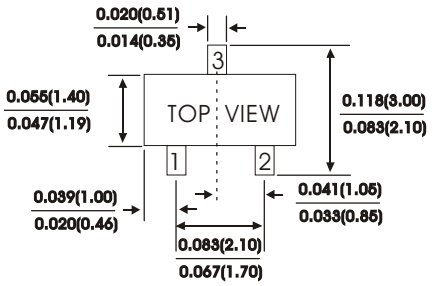
MMBD4148

SMALL SIGNAL SWITCHING DIODES

SOT-23

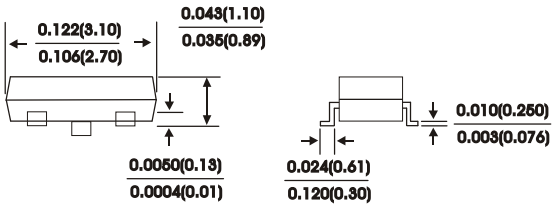


FEATURES:

- 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℃ 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	MMBD4148	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 Ta=25 °C And F ≥ 50HZ	$I_{(AV)}$	0.15 [1)]	Amps
Peak forward surge current, <1S single half sine-wave auperimposed on rated load Ta=25 °C	I_{FSM}	0.5	Amps
Power dissipation at Ta=25° C	Ptot	500 [1)]	mW
Maximum instantaneous forward voltage drop per leg at 0.01A	V_F	1.0	Volts
Maximun leakage current At V_R=20V At V_R=75V	I_R	2.5 5.0	nA uA
Maximum Reverse recovery time	TRR	4	ns
Maximun junction capacitance VR=VF=0V	C_J	4	PF
Maximun Thermal resistance junction to ambient (NOTE 1)	Rth- JA	450 [1)]	K /W
Operating temperature range	T_J	150	℃
storage temperature range	Tstg	-55 to+150	℃

NOTES:
(1)Reverse recovery condition I_F=0.01A , I_R =0.01A , V_R=6V , R_L=100Ω
1):Device on fiberglass 0.059 in(1.5mm),copper leads 0.012 in (0.3mm)

Device Marking

Item	Marking	Eqivalent Circuit diagram
MMBD4148	5D	

FIG 1-FORWARD CHARACTERISTICS

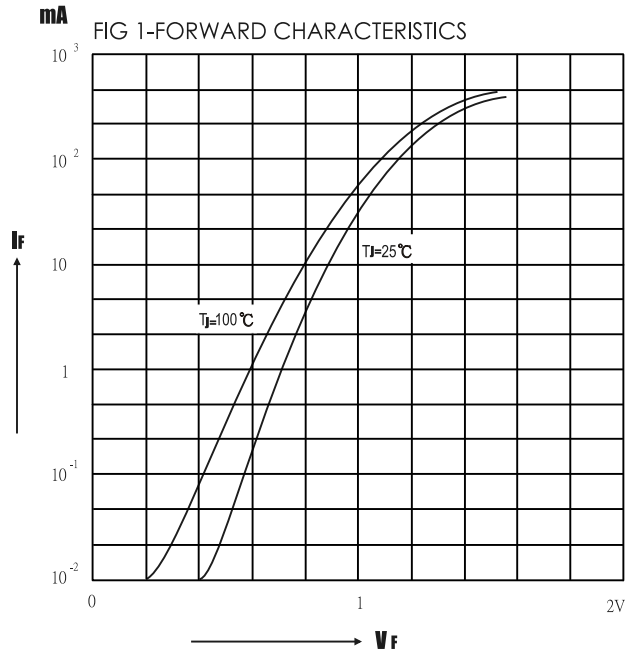


FIG 2: DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

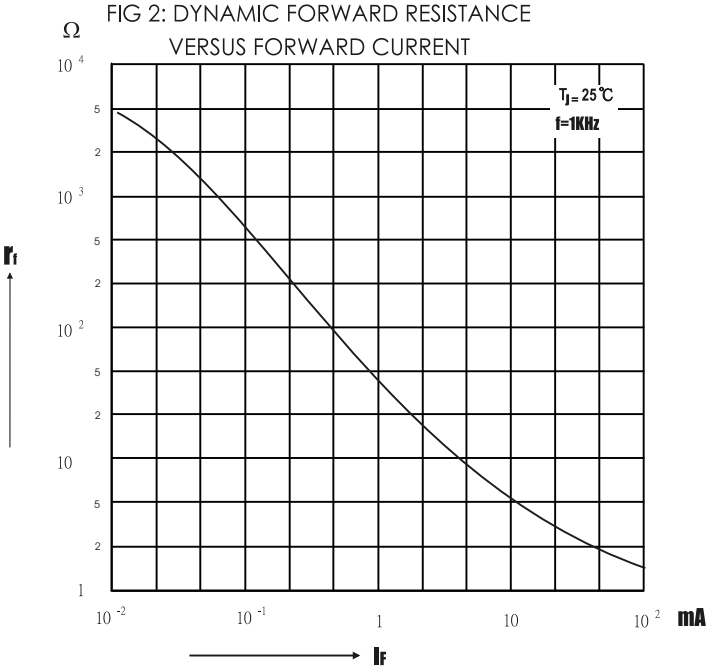


FIG 3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

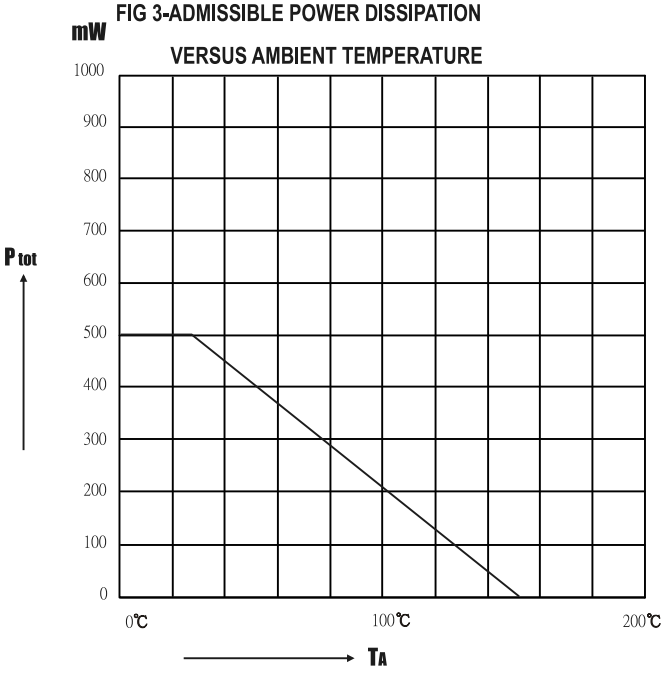


FIG. 4-RELATIVE CAPACITANCE VERSUS REVERS VOLTAGE

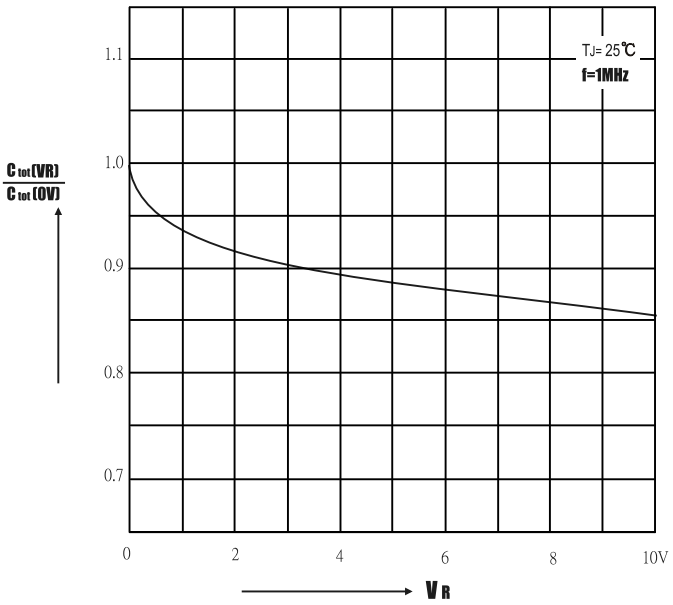


FIG 5 : LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

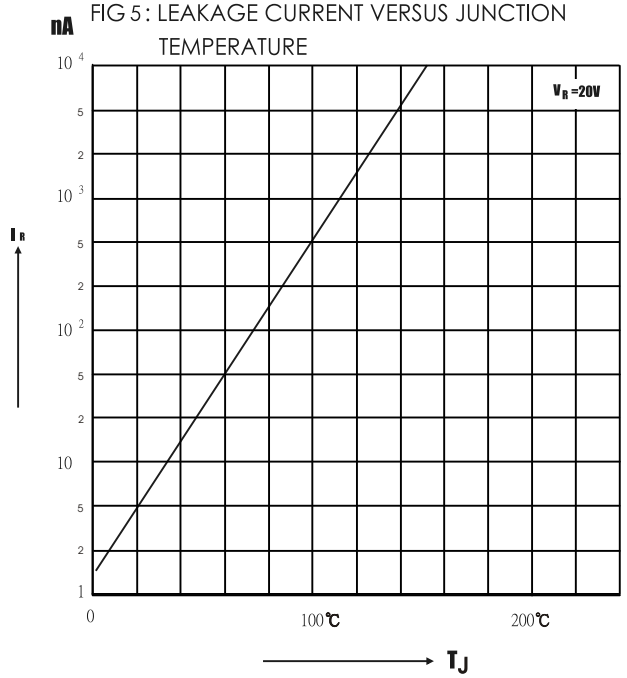


FIG 6 : ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION