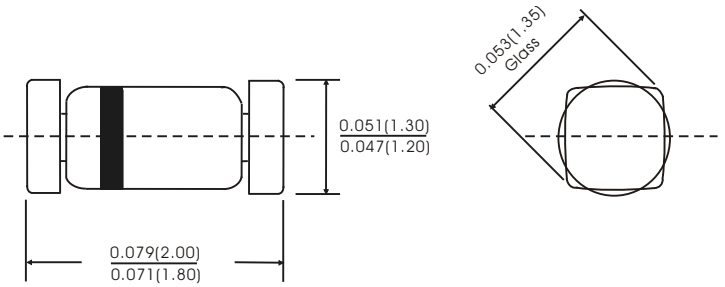
MCL4148 THRU MCL4448

SURFACE MOUNT SWITCHING DIODES

FEATURES:

- Saving apace
- Fits SOD-323/SOT-23 footprints
- Micro Melf package
- Silcon epitaxial planar



MECHANICAL DATA

Case: glass case

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	MCL4148	MCL4448	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 ℃ And VR=0V	$I_{(AV)}$	0.15		Amps
Peak forward surge current, <1S single half sine-wave auperimposed on rated load Ta=25℃	I_{FSM}	2.0		Amps
Power dissipation at Ta=25℃	Pv	500		mW
Maximum instantaneous forward voltage IF=10mA IF=5mA IF=100mA	V_F	1.0	0.72 1.0	Volts
MINMUN rectification efficiency at f=100MHZ, V_{HF}=2V	η	45		%
Maximun leakage current At V_R=20V At V_R=75V At V_R=20V Ta=150℃	I_R	25 5 50		nA uA uA
Maximum breakdpwn voltage	$V_{(BR)}$	100		Volts
Maximum Reverse recovery time (Note 1)	TRR	8		ns
Maximun junction capacitance VR=VF=0V, f=1MHz VHF=50mV	C_D	4		PF
Maximun Thermal resistance junction to ambient (on PC board 50mmx50mmx16mm)	Rth JA	500		K /W
Operating temperature range	T_J	175		℃
storage temperature range	Tstg	-65 to+175		℃

NOTES:
(1)Reverse recovery condition I_F=0.01A, I_R =0.001A, V_R=6V, R_L=100

FIG.1-INSTANTANEOUS FORWARD CHARACTERISTICS

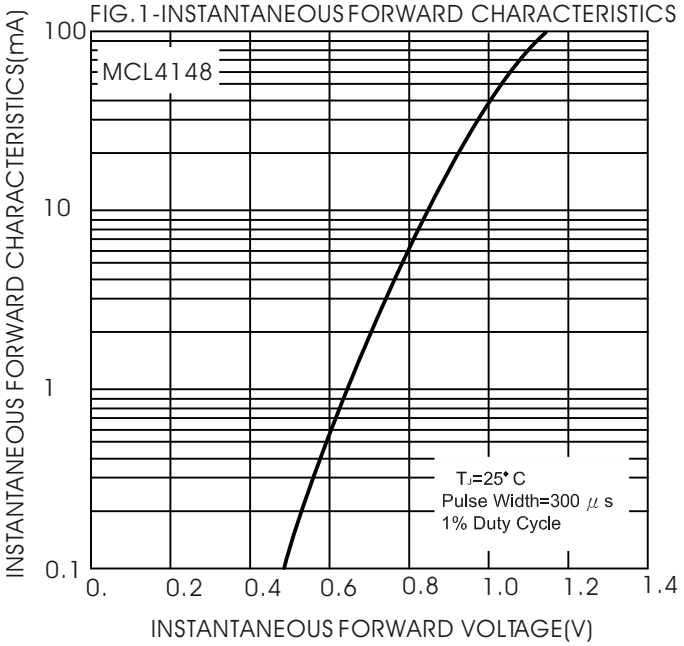


FIG.2-INSTANTANEOUS FORWARD CHARACTERISTICS

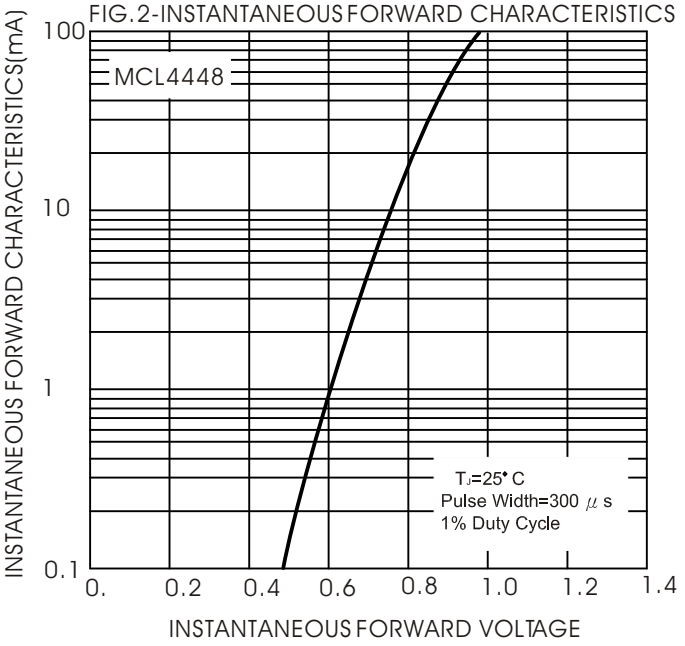


FIG.5-REVERSE CURRENT CHARACTERISTICS

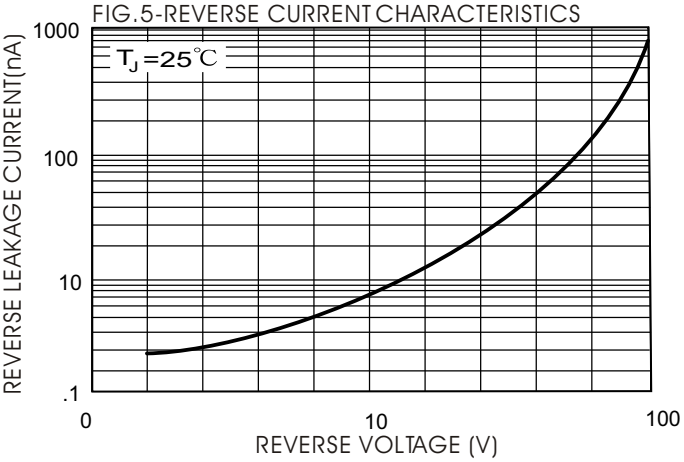


FIG.4- DIODE CAPACITANCE