Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065
TEL: (805) 522-9998 FAX: (805) 522-9989
E-mail: frontiersales@frontierusa.com
Web: http://www.frontierusa.com

MINI MELF SILICON EPITAXIAL PLANAR DIODE

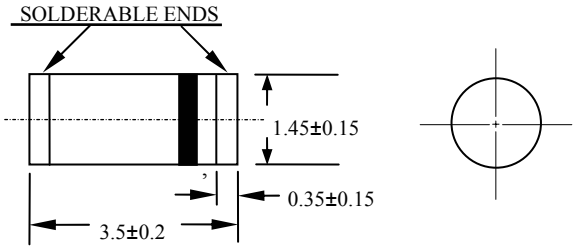
MM4148-LFR

FEATURES

- FAST SWITCHING
- MINI MELF SIZE
- ROHS

MECHANICAL DATA

- CASE: GLASS, DO-213AA (GL34), DIMENSIONS IN MILLIMETERS
- LEADS: SOLDERABLE PER MIL-STD-202,METHOD 208
- POLARITY: CATHODE INDICATED BY COLOR BAND
- WEIGHT: 0.036 GRAMS



RATINGS	SYMBOL	MM4148-LFR	UNITS
REVERSE VOLTAGE	V_R	75	V
PEAK REVERSE VOLTAGE	V_{RM}	100	V
RECTIFIED CURRENT (AVERAGE) HALF WAVE RECTIFICATION WITH RESIST LOAD AT T_{amb} = 25℃ AND f ≧ 50HZ (NOTE 1)	I_O	150	mA
SURGE FORWARD CURRENT AT T < 1 s AND T_J = 25℃	I_{FSM}	500	mA
POWER DISSIPATION AT T_{amb}=25℃	P_{TOT}	500	mW
JUNCTION TEMPERATURE	T_J	200	℃
STORAGE TEMPERATURE RANGE	T_S	- 55 TO + 200	℃

CHARACTERISTICS T_J=25℃	SYMBOL	MIN	TYP	MAX	UNITS
FORWARD VOLTAGE AT I_F=10mA	V_F	-	-	1	V
LEAKAGE CURRENT					
AT V_R=20V	I_R	-	-	25	nA
AT V_R=75V	I_R	-	-	5	μA
AT V_R=20V T_J=150℃	I_R	-	-	50	μA
REVERSE BREAKDOWN VOLTAGE TESTED WITH 100μA PULSES	V_R	100	-	-	V
CAPACITANCE AT V_F=V_R=0	C_{TOT}	-	-	4	PF
VOLTAGE RISE WHEN SWITCHING ON TESTED WITH 50mA FORWARD PULSES TP=0.1μS RISE TIME < 30ns F_P=5 TO 100 KHZ	V_{FR}	-	-	2.5	V
REVERSE RECOVERY TIME FROM I_F=10mA TO I_R=1mA V_R=6V R_L=100Ω	T_{RR}	-	-	4	nS
THERMAL RESISTANCE JUNCTION TO AMBIENT AIR (NOTE 1)	R_{THA}	-	-	0.35	K / mW
RECTIFICATION EFFICIENCY AT f=100 MHZ V_{RF}=2V	η_V	0.45	-	-	-

NOTE: 1. LEADS KEPT AT AMBIENT TEMP.

RATINGS AND CHARACTERISTIC CURVE MM4148-LFR

FIG. 1-FORWARD CHARACTERISTIC

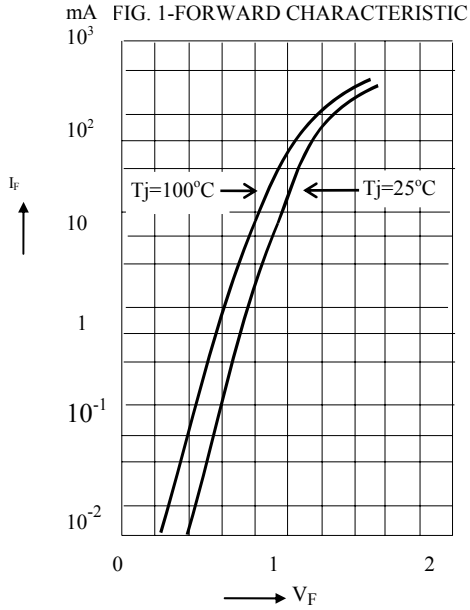


FIG. 2-DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

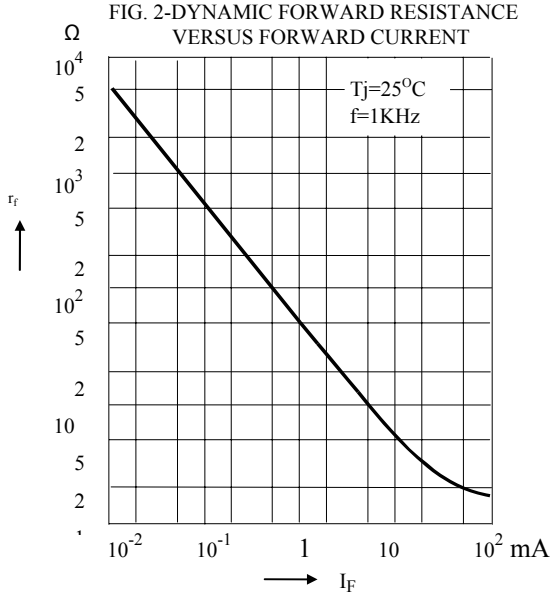


FIG. 3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE
Valid provided that leads at a distance of 8mm from case are kept at ambient temperature

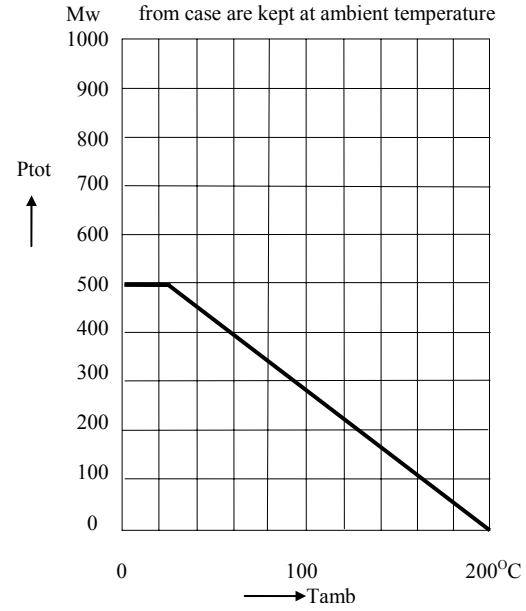
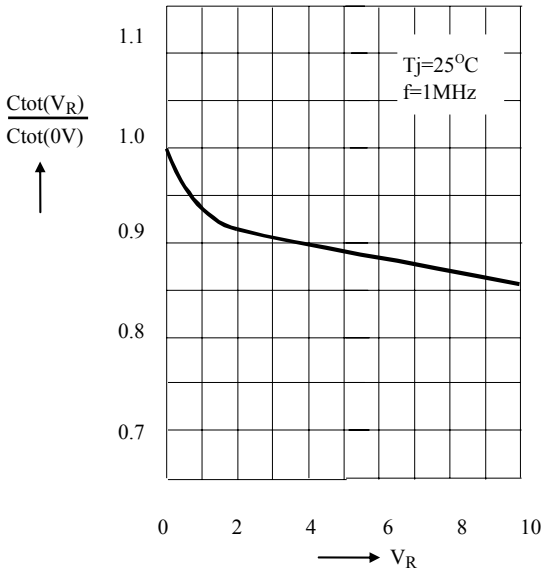


FIG. 4-RELATIVE CAPACITANCE VERSUS REVERSE VOLTAGE



RATINGS AND CHARACTERISTIC CURVE MM4148-LF

FIG. 5-LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

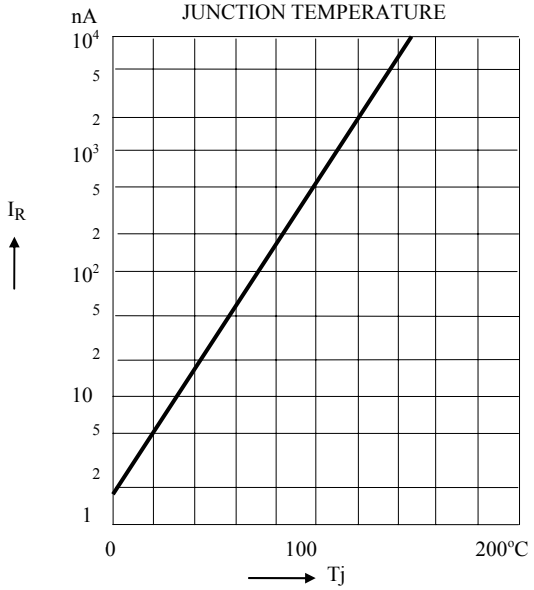


FIG. 6-ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

Valid provided that leads at a distance of 8mm from case are kept at ambient temperature

