

Surface Mount Glass Passivated Silicon Rectifier

SM4001 - 4007

Melf Package

General Purpose Rectifiers

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

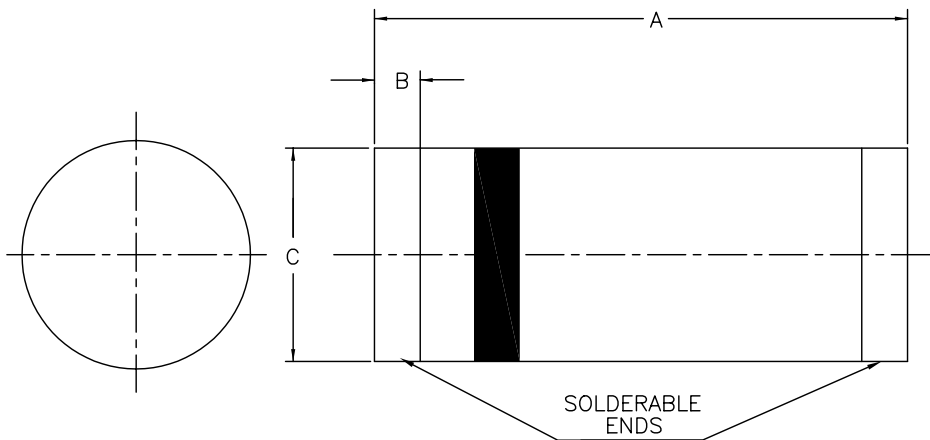
DESCRIPTION	SYMBOL	SM 4001	SM 4002	SM 4003	SM 4004	SM 4005	SM 4006	SM 4007	UNIT
Peak Repetitive Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Average Forward Rectified Current T _a =75°C	I _O	1.0							A
Peak Forward Surge Current I _{FM(surge)} ·8.3ms single half sine-wave superimposed on rated load	I _{FSM}	30							A
Maximum Thermal Resistance	(Note2) R _{th(j-l)}	20							°C/W
	(Note3) R _{th(j-a)}	50							°C/W
Junction Capacitance (Note1)	C _i	typ 15							pF
Operating And Storage Junction Temperature Range	T _i , T _{stg}	-65 to +175							°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MAX	UNIT
Maximum Forward Voltage Drop	V _F	I _F = 1.0A	1.1	V
Maximum Full-Load Reverse Current, Full Cycle Average at T _A = 75°C	I _R	T _a =75°C	30	μA
Maximum DC Average Reverse Current		@ rated V _R , T _a = 25°C	5	μA
		@ rated V _R , T _a = 125°C	50	μA

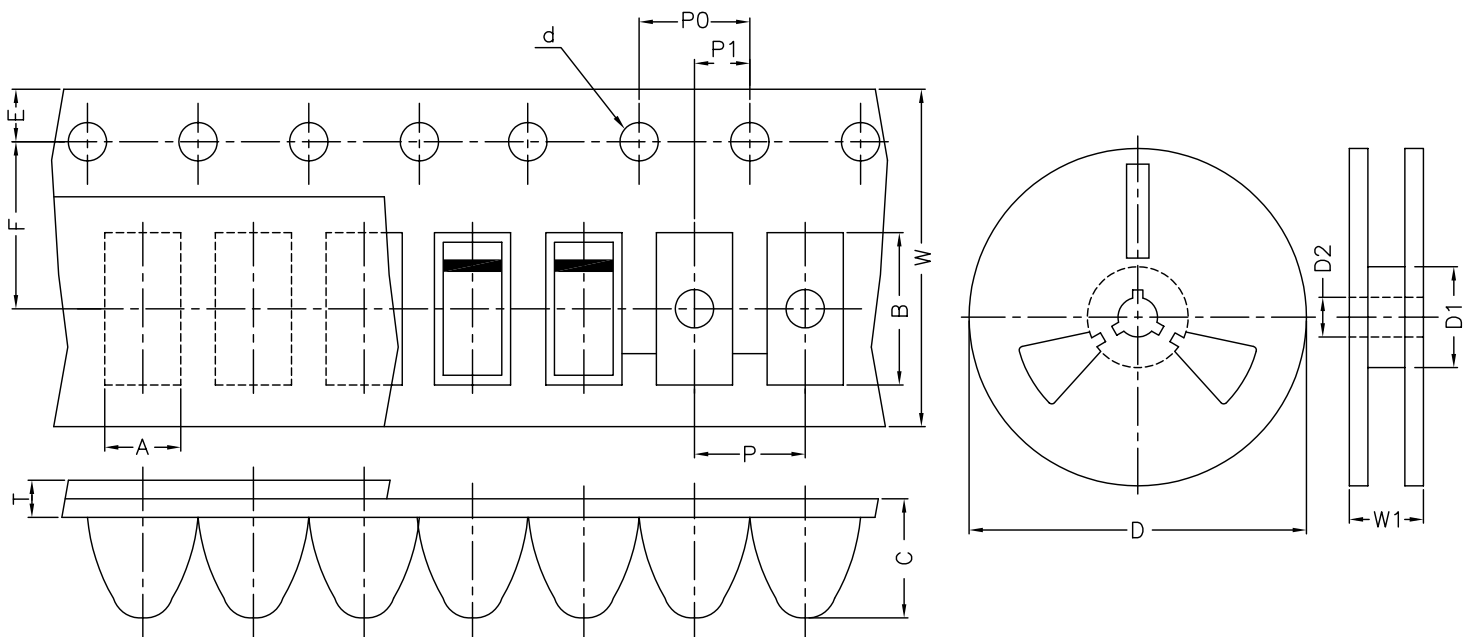
- NOTES :
- 1 . Measured at 1.0 MHz and applied average voltage of 4.0V DC.
 2. Thermal resistance junction to terminal 6.0mm² copper pads to each terminal.
 3. Thermal resistance junction to ambient, 6.0mm² copper pads to each terminal.

Melf Package & Reel Taping Specification



DIM	MIN	MAX
A	4.8	5.2
B	0.46	0.60
C	2.4	2.7

All dimensions are in mm



ITEM	SYMBOL	SPECIFICATION (mm)	SPECIFICATION (inch)
CARRIER WIDTH	A	3.2 MAX.	0.126 MAX.
CARRIER LENGTH	B	7.8 MAX.	0.307 MAX.
CARRIER DEPTH	C	4.5 MAX.	0.177 MAX.
SPROCKET HOLE	d	1.5 ±1.00	0.059±0.004
REEL OUTSIDE DIAMETER	D	178.0 ±2.00	7.00 ±0.079
REEL INNER DIAMETER	D1	50.0 MIN.	1.969 MIN.
FEED HOLE DIAMETER	D2	13.0 ±0.50	0.512 ±0.020
SPROCKET HOLE POSITION	E	1.75 ±0.10	0.069 ±0.004
PUNCH HOLE POSITION	F	5.5 ±0.10	0.217 ±0.004
PUNCH HOLE PITCH	P	4.0 ±0.10	0.157 ±0.004
SPROCKET HOLE PITCH	P0	4.0 ±0.10	0.157 ±0.004
EMBOSSMENT CENTER	P1	2.0 ±0.05	0.079 ±0.002
OVERALL TAPE THICKNESS	T	1.1 MAX.	0.043 MAX.
TAPE WIDTH	W	12.0 ±0.30	0.472 ±0.12
REEL WIDTH	W1	10.4 MAX.	0.724 MAX.

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