

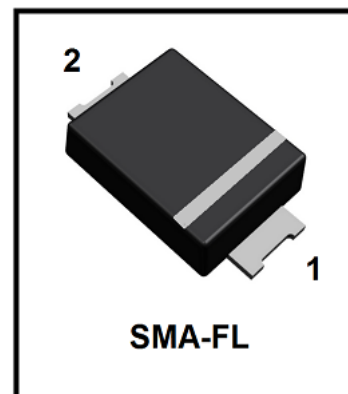
SM540AF

Schottky Barrier Rectifiers

Reverse Voltage 40V Forward Current 5.0A

1. FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling and polarity protection applications
- Guarding for over voltage protection
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- MSL: 1



2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
SM540AF	S54	3000/Tape&Reel

3. MAXIMUM RATINGS (Ta = 25°C unless otherwise noted.)

Parameter	Symbol	Limits	Unit
Maximum repetitive peak reverse voltage	VRRM	40	V
Maximum RMS voltage	VRMS	28	V
Maximum DC blocking voltage	VDC	40	V
Maximum average forward rectified current at TC = 75°C (See fig. 1)	IF(AV)	5	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	120	A
Typical thermal resistance (Note 1)	RθJA	150	°C/W
	RθJL	35	
Operating junction and storage temperature range	TJ, TSTG	-40 ~+150	°C

4. ELECTRICAL CHARACTERISTICS (Ta = 25°C unless otherwise noted.)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum instantaneous forward voltage at IF=5.0A	VF	-	0.48	0.55	V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage Tj = 100°C	IR	-	11	500	μA
		-	-	30	mA
Typical junction capacitance at VR=4.0V, f=1MHz	CJ	-	265	-	pF

1. 8.0mm² (.013mm thick) land areas

5. ELECTRICAL CHARACTERISTICS CURVES

Fig. 1 - Forward Current Derating Curve

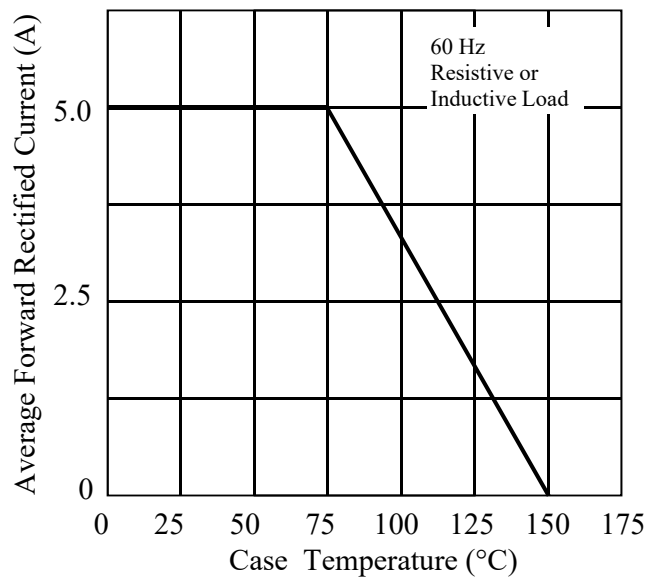


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

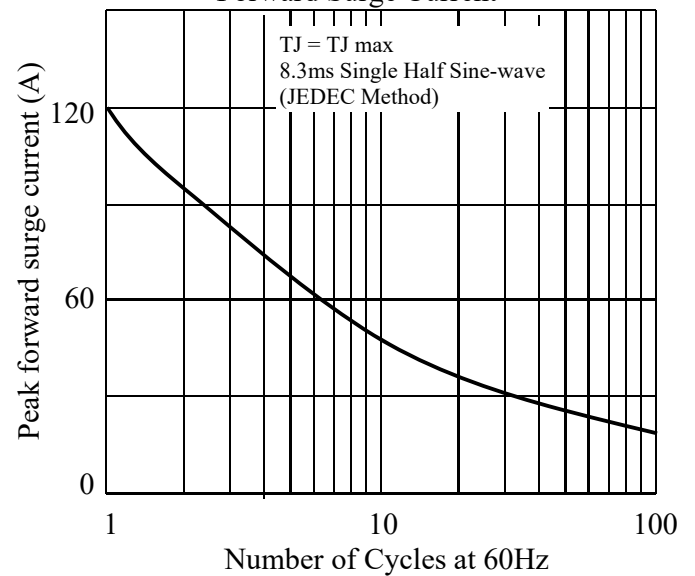


Fig 3. - Typical Forward Characteristics

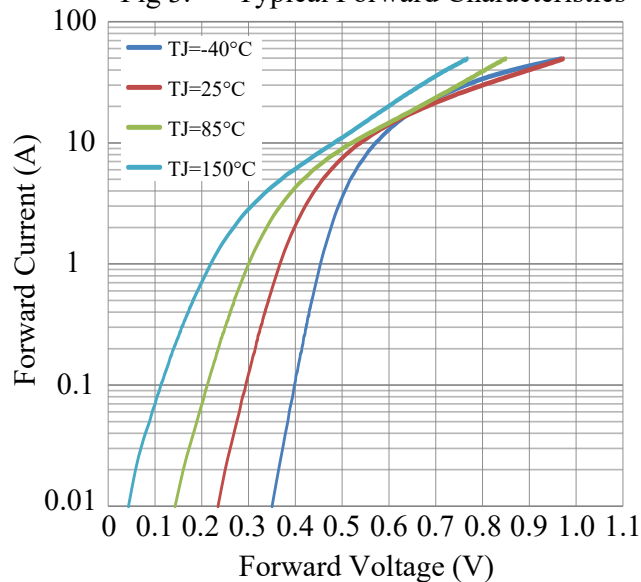


Fig 4. - Typical Reverse Characteristics

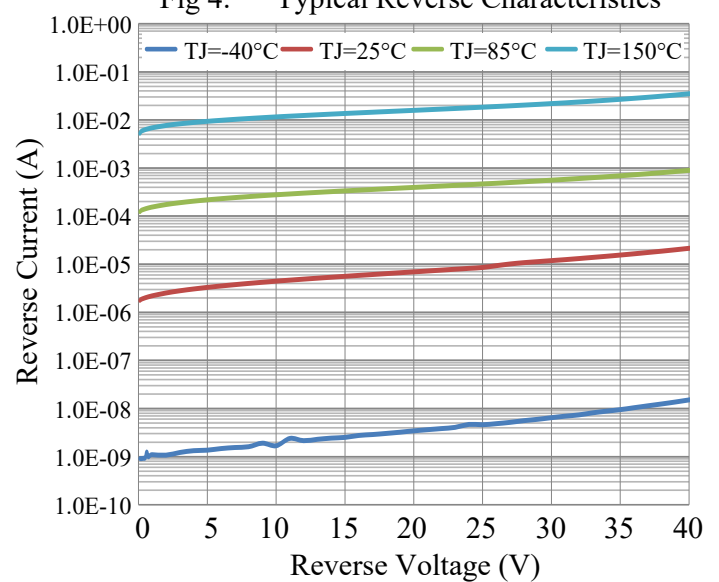


Fig 5. - Typical Transient Thermal Impedance

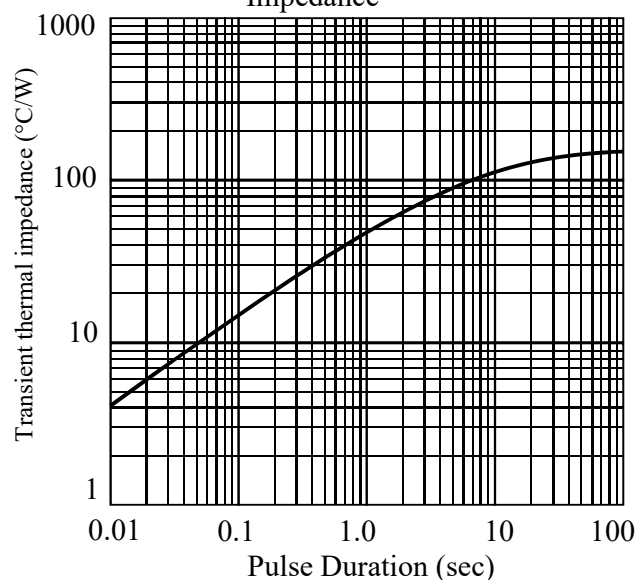
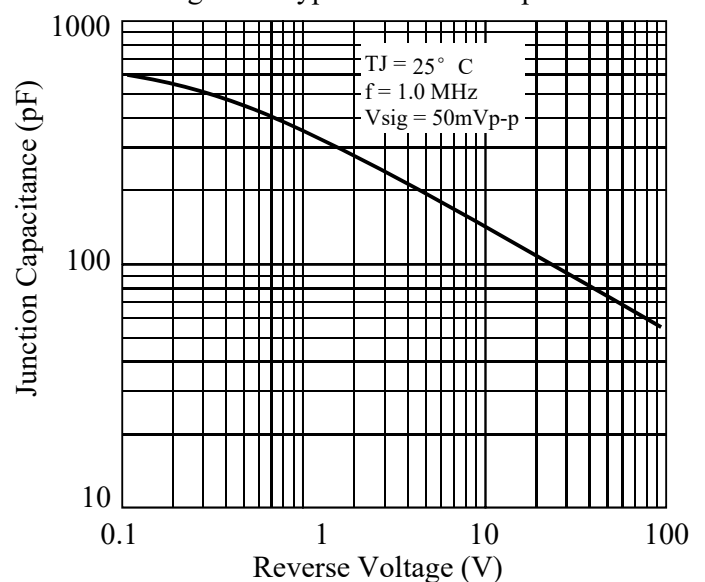
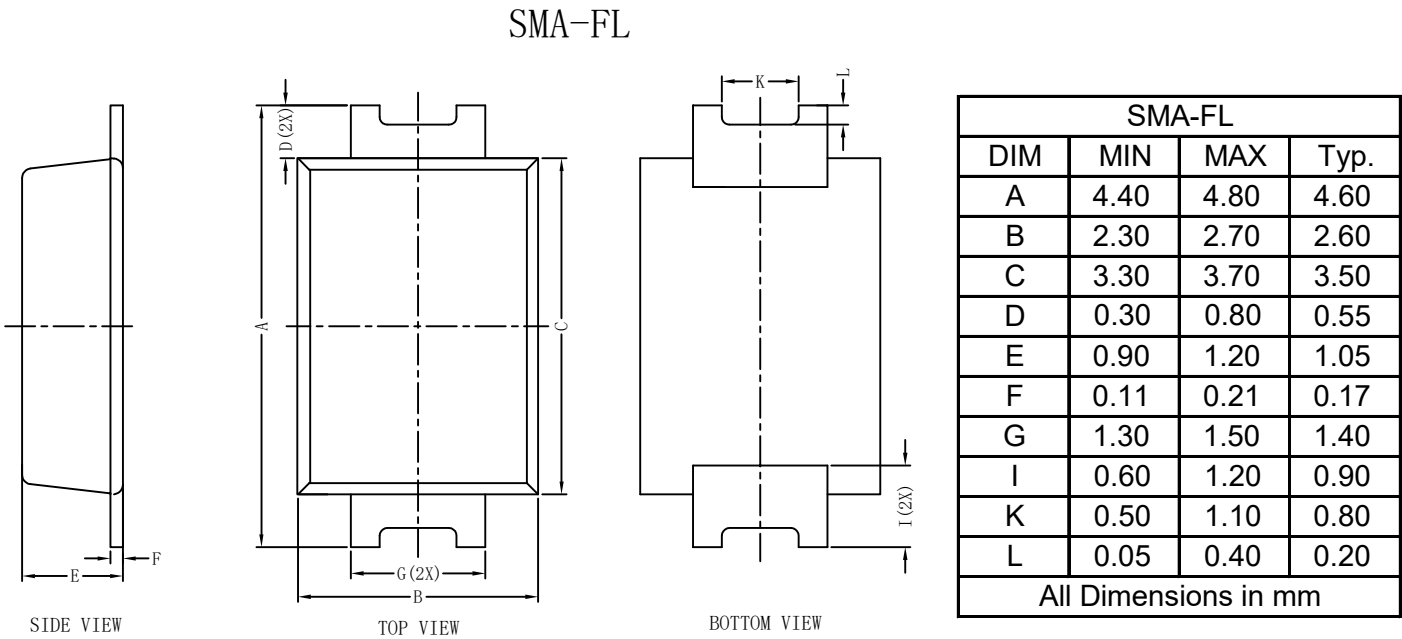


Fig 6. - Typical Junction Capacitance



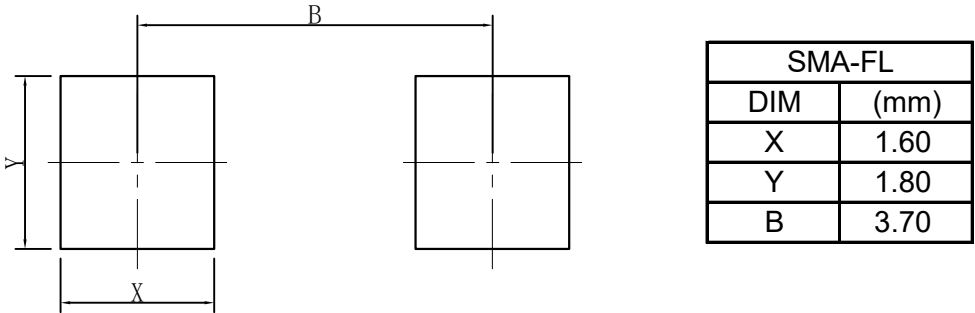
6. OUTLINE AND DIMENSIONS



GENERAL NOTES

- 1.Top package surface finish $Ra0.4\pm0.2\mu m$
- 2.Bottom package surface finish $Ra0.7\pm0.2\mu m$

7. SOLDERING FOOTPRINT



DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
- Before you use our Products for new Project, you are requested to carefully read this document and fully understand its contents. LRC shall not be in any way responsible or liable for failure, malfunction or accident arising from the use of any LRC's Products against warning, caution or note contained in this document.
- All information contained in this document is current as of the issuing date and subject to change without any prior notice. Before purchasing or using LRC's Products, please confirm the latest information with a LRC sales representative.