

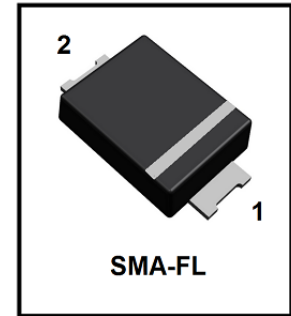
# S-SM540AF-E

Schottky Barrier Rectifiers

Reverse Voltage 40V Forward Current 5.0A

## 1. FEATURES

- We declare that the material of product complies with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
- 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
- Guardring for over voltage protection
- High temperature soldering guaranteed:  
260°C/10 seconds at terminals
- IEC61000-4-2 ESD Air Contact  $\geq \pm 15KV$



## 2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S-SM540AF-E	S54●	3000/Tape&Reel

## 3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Maximum repetitive peak reverse voltage	VRRM	40	V
Maximum RSM voltage	VRSM	28	V
Maximum DC blocking voltage	VDC	40	V
Maximum average forward rectified current at TC = 75°C	IF(AV)	5	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	100	A
Typical thermal resistance (Note 1)	RθJA	150	°C/W
	RθJL	35	
Operating junction and storage temperature range	TJ, TSTG	-40 ~+150	°C
Lead temperature range	TL	125	°C

## 4. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum instantaneous forward voltage at 5.0A	VF	-	-	0.5	V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage Tj = 125°C	IR	-	-	0.1	mA
		-	-	10	
Typical junction capacitance at 4.0V, 1MHz	CJ	-	110	-	PF

1. 8.0mm<sup>2</sup> (.013mm thick) land areas

## 5. ELECTRICAL CHARACTERISTICS CURVES

Fig. 1 - Forward Current Derating Curve

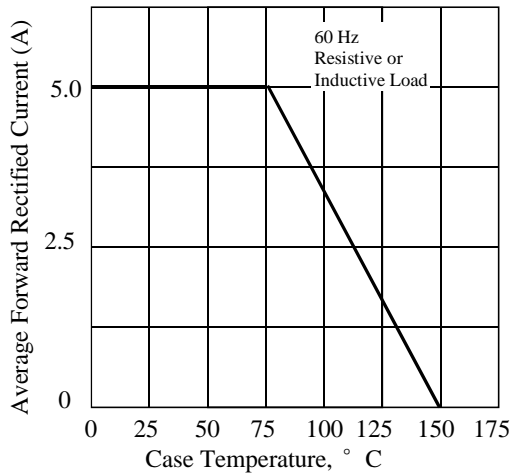


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

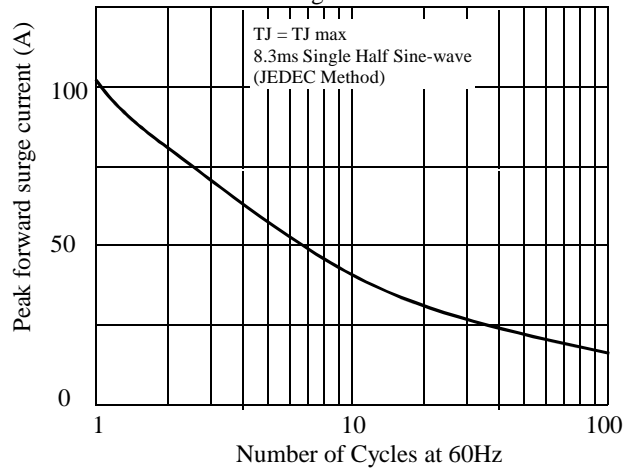


Fig 3. - Typical Instantaneous Forward Characteristics

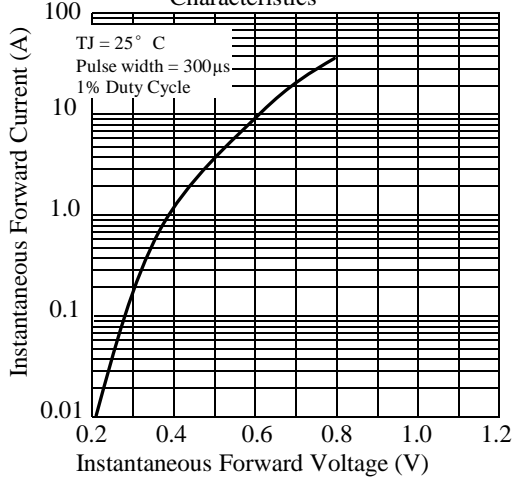


Fig 4. - Typical Reverse Characteristics

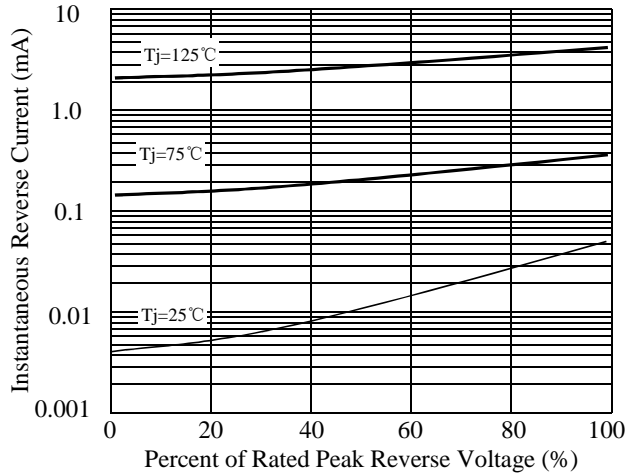


Fig 5. - typical transient thermal impedance

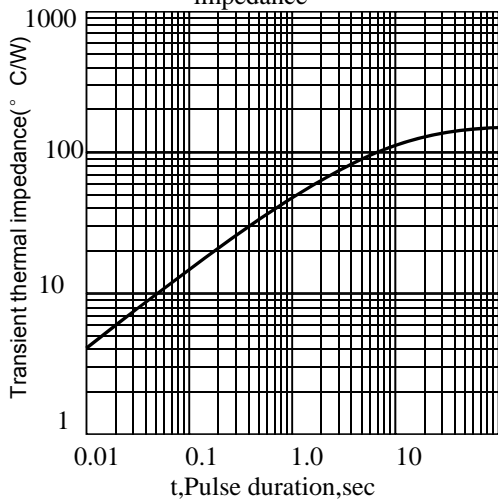
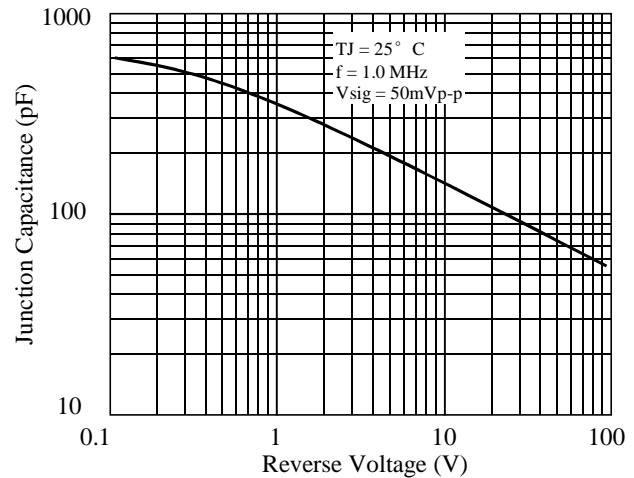
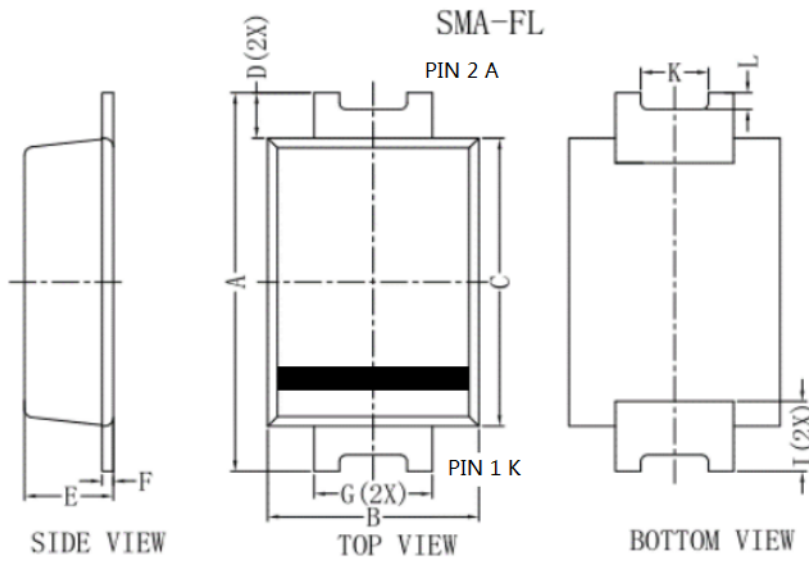


Fig 6. - Typical Junction Capacitance



## 6. OUTLINE AND DIMENSIONS



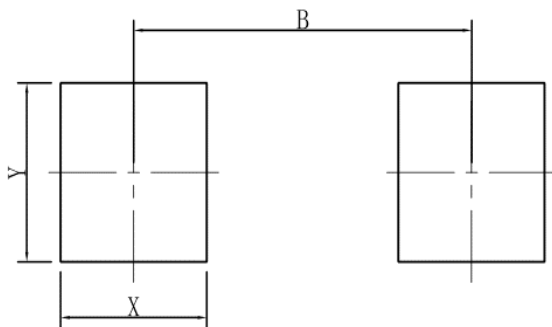
SMA-FL			
DIM	MIN	MAX	Typ.
A	4.40	4.80	4.60
B	2.30	2.70	2.60
C	3.30	3.70	3.50
D			0.55
E	0.90	1.20	1.05
F	0.11	0.21	0.17
G	1.30	1.50	1.40
I	-	-	0.90
K	-	-	0.80
L	-	-	0.20

All Dimensions in mm

### GENERAL NOTES

1. Top package surface finish  $Ra0.4 \pm 0.2 \mu m$
2. Bottom package surface finish  $Ra0.7 \pm 0.2 \mu m$

## 7. SOLDERING FOOTPRINT



SMA-FL	
DIM	(mm)
X	1.60
Y	1.80
B	3.70

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