

S-SM140A

Schottky Barrier Rectifiers

Reverse Voltage 40V Forward Current 1.0A

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
- * Guardring for over voltage protection
- * High temperature soldering guaranteed: 260°C/10 seconds at terminals
- * S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

Mechanical Data

Case: JEDEC DO-214AC, molded plastic

Terminals: Plated leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.0023 oz., 0.065 g

Handling precaution:None

1.Electrical Characteristic

Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	S-SM140A	Unit
device marking code		S14	
Maximum repetitive peak reverse voltage	V_{RRM}	40	V
Maximum RSM voltage	V_{RSM}	28	V
Maximum DC blocking voltage	V_{DC}	40	V
Maximum average forward rectified current at TC = 75°C(See fig. 1)	$I_F(AV)$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	40	A
Typical thermal resistance (Note 1)	$R_{\theta JA}$	150	°C/W
Operating junction and storage temperature range	TJ, TSTG	-40 to +150	°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	S-SM140A	Unit
Maximum instantaneous forward voltage at 1.0A	V_F	0.55	V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TA = 100°C	IR	0.5 10.0	mA
Typical junction capacitance at 4.0V, 1MHz	CJ	110	PF

NOTES:

1. 8.0mm2 (.013mm thick) land areas



We declare that the material of product is Haloggen free (green epoxy compound)

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2. Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

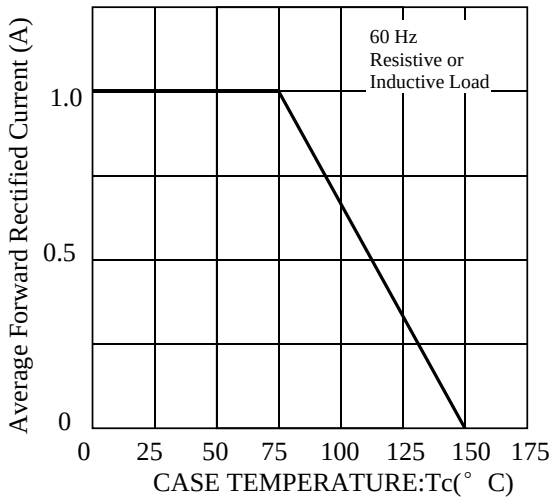


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

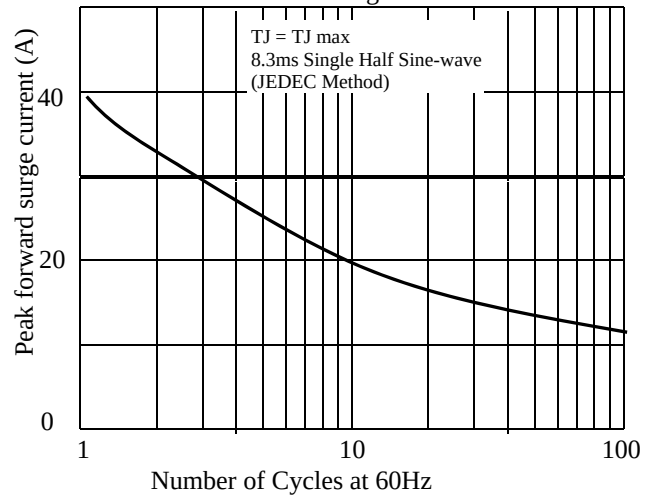


Fig 3. - Typical Instantaneous Forward Characteristics

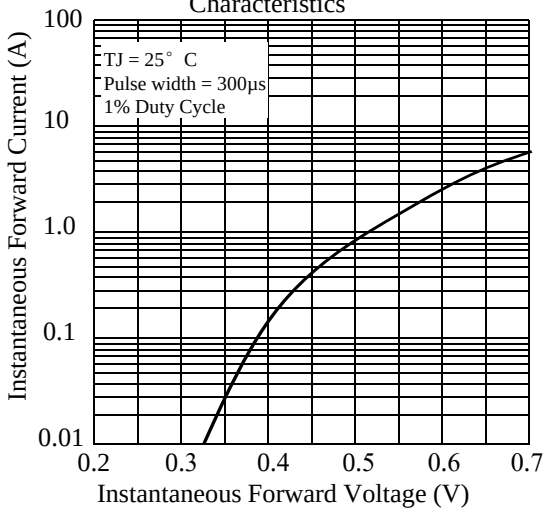


Fig 4. - Typical Reverse Characteristics

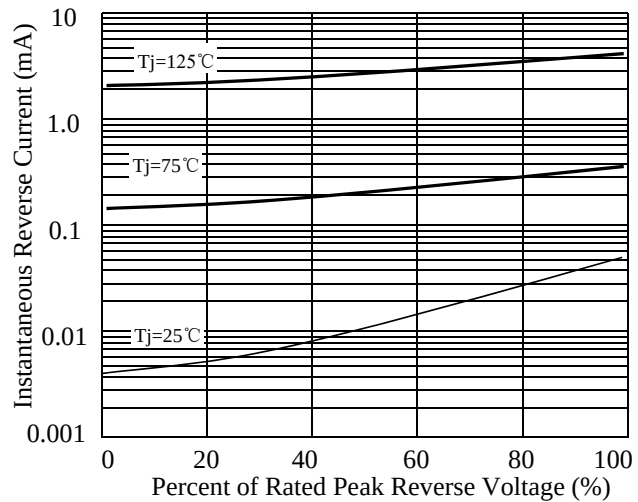


Fig 5. - typical transient thermal impedance

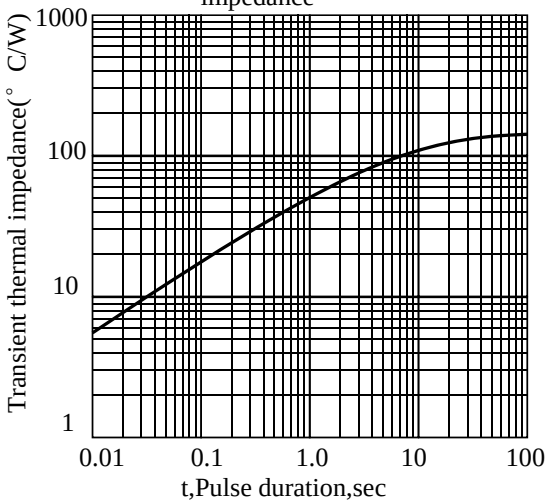
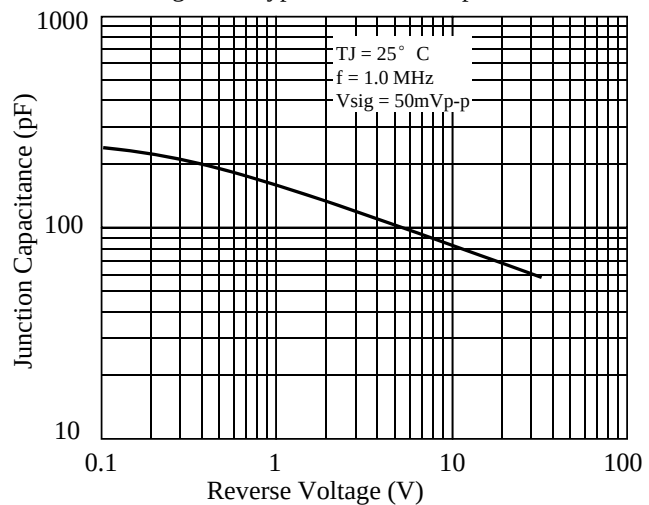
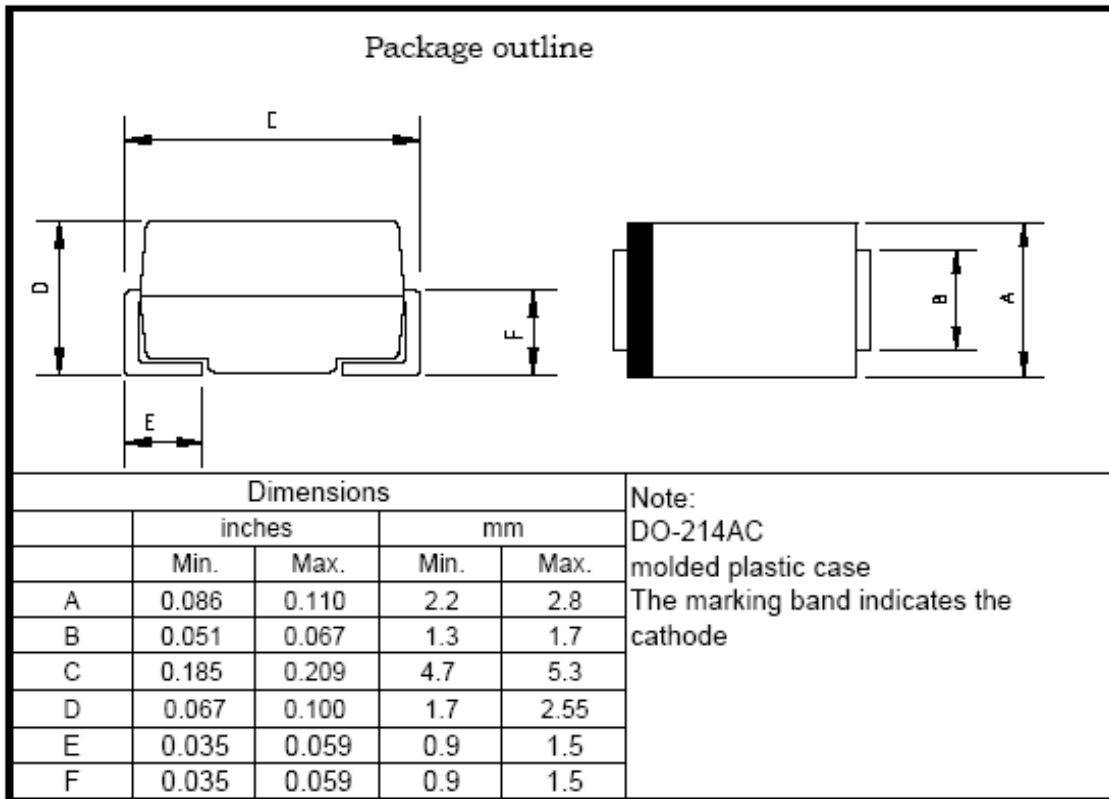


Fig 6. - Typical Junction Capacitance

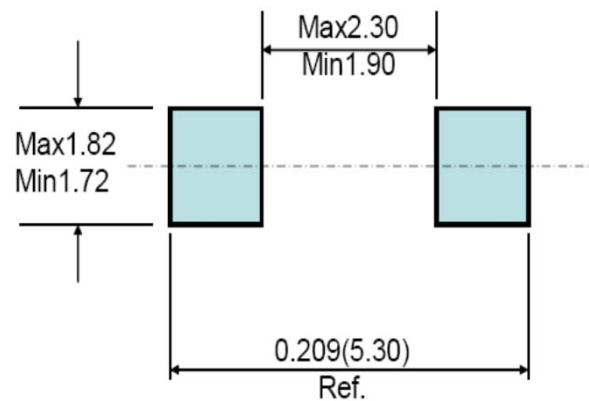


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3. dimension:



Mounting Pad Layout ---SMA



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4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2013. 11. 25
2	印字变更	谭志伟	2017-10-30
3	修正浪涌曲线	谭志伟	2018-1-31
4	修正高温曲线标注	谭志伟	2021-7-05
D	VF 0. 5V变更到0. 55V	谭志伟	2021-10-09