

SM520A thru SM5100A

Schottky Barrier Rectifiers

Reverse Voltage 20 to100V Forward Current 5.0A

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

Mechanical Data

Case: JEDEC DO-214AC,
molded plastic over glass body
Terminals: Plated axial 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



We declare that the material of product compliance with ROHS requirements

1.Electrical Characteristic

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

Parameter Symbol	symbol	SM520A	SM530A	SM540A	SM550A	SM560A	SM580A	SM5100A	Unit
device marking code		S52	S53	S54	S55	S56	S58	S510	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum average forward rectified current at $T_L = 25^\circ\text{C}$	$I_F(AV)$	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100							A
Typical thermal resistance (Note 1)	$R_{\theta JA}$	150							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-40 to +150							°C

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

Parameter Symbol	symbol	SM520A	SM530A	SM540A	SM550A	SM560A	SM580A	SM5100A	Unit
Maximum instantaneous forward voltage at 5.0A	V _F	0.50			0.70		0.85		V
Maximum instantaneous forward voltage at 3.0A	V _F	0.46			0.65		0.80		V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TA = 100°C	IR	0.5 50							mA
Typical junction capacitance at 4.0V, 1MHz	CJ	380							PF

NOTES:

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

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2. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

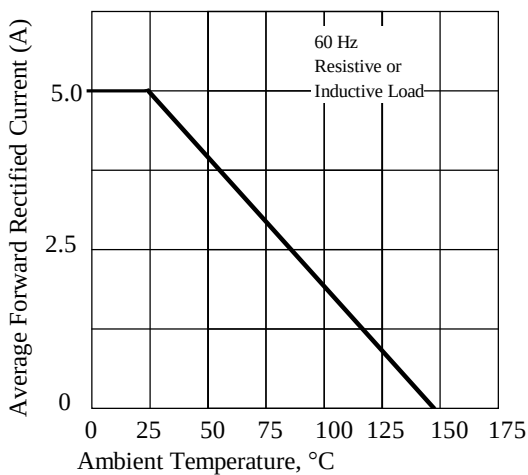


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

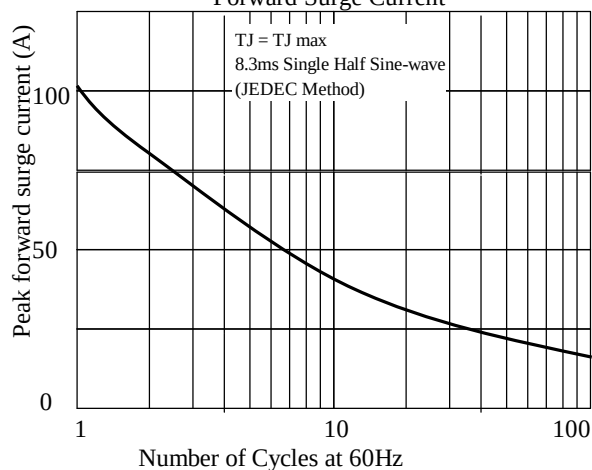


Fig 3. - Typical Instantaneous Forward Characteristics

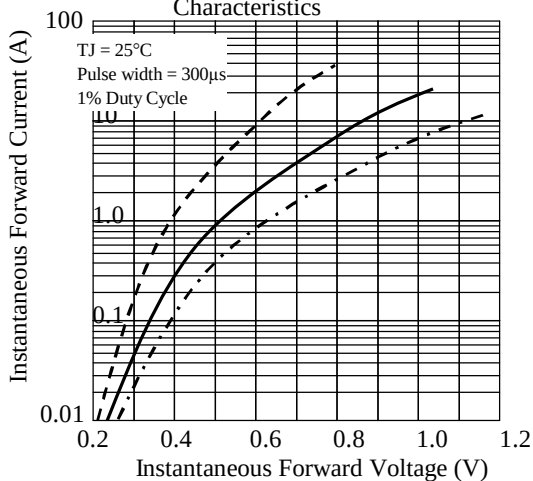


Fig 4. - Typical Reverse Characteristics

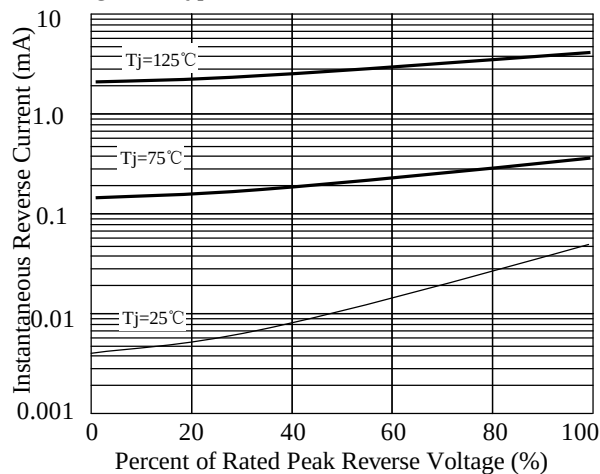


Fig 5. - typical transient thermal impedance

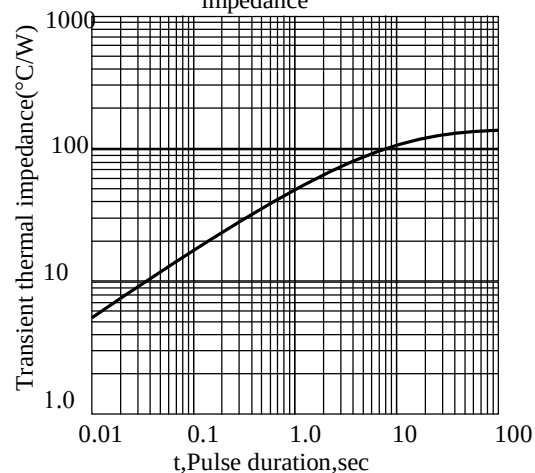
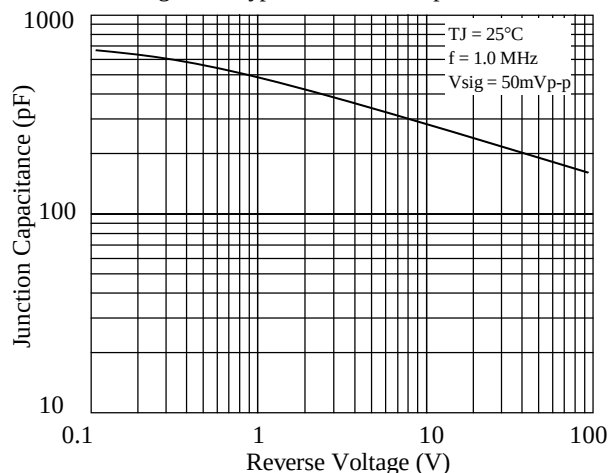
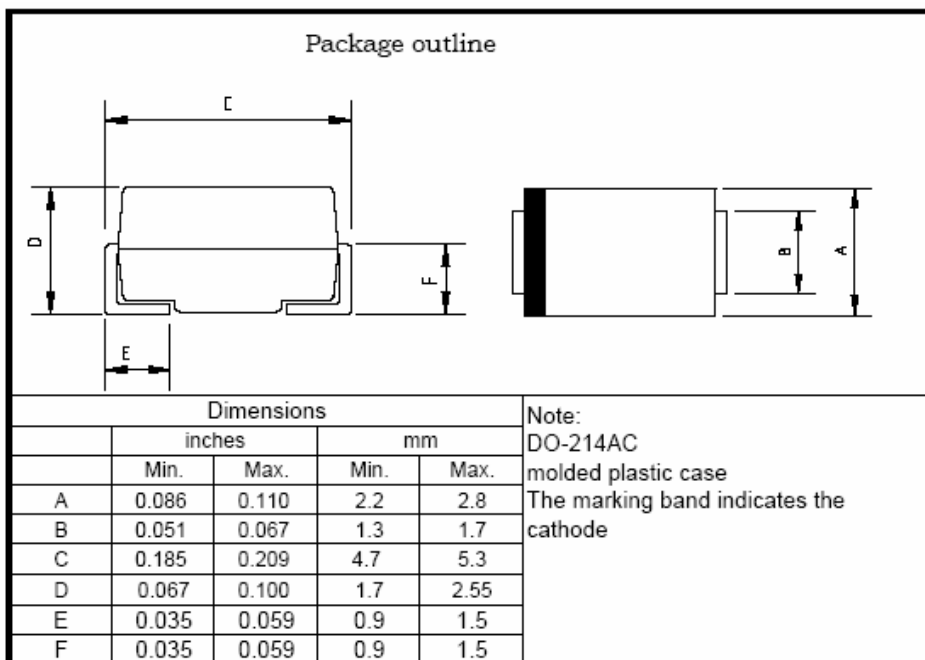


Fig 6. - Typical Junction Capacitance



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3. dimension:



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5. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2011-3-4
2	修正RMS	周杰	2011-7-6
3	修正热阻	周杰	2023-8-28