

II. Schottky Rectifier

2.0A Surface Mount Schottky Rectifier S22AF~S220AF

(Package: SMAF)

<p><u>FEATURES</u></p> <ul style="list-style-type: none"> • The plastic package carries Underwriters Laboratory Flammability Classification 94V-0 • For surface mounted applications • Metal silicon junction, majority carrier conduction • Low power loss, high efficiency • Built-in strain relief, ideal for automated placement • High forward surge current capability • High temperature soldering guaranteed : 260°C/10 seconds at terminals <p><u>MECHANICAL DATA</u></p> <ul style="list-style-type: none"> • Case : SMAF molded plastic body • Terminals : Leads solderable per MIL-STD-750, Method 2026 • Polarity : Color band denotes cathode end • Mounting Position : Any • Weight : 0.038 grams 	<p>Case: SMAF Dimensions in inches and (millimetres)</p>
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Ratings & Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristics	Symbol	S22AF	S23AF	S24AF	S25AF	S26AF	S28AF	S210AF	S215AF	S220AF	Units	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	Volts	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	150	Volts	
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	Volts	
Maximum average forward current at T_L (See Fig.1)	I_o	2.0									Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0									Amps	
Maximum instantaneous forward voltage at 5.0A	V_F	0.55			0.70		0.85		0.95		Volts	
Maximum DC reverse current $T_a = 25^\circ C$ at rated DC blocking voltage $T_a = 100^\circ C$	I_R	0.5				0.1				mA		
		10.0				5.0		2.0				
Typical junction capacitance (Note 1)	C_j	220.0			180.0						PF	
Typical thermal resistance (Note 2)	R_{th-JA}	95.0									°C/w	
Operating junction temperature range	T_j	-55 to +125					-55 to +150					°C
Storage temperature range	T_{stg}	-55 to +150									°C	

Notes:

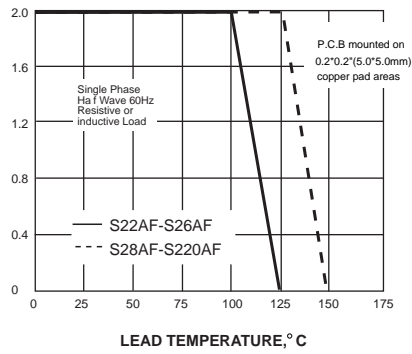
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

<http://patron-components.com/>

Ratings and Characteristic Curves of S22AF~S220AF

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

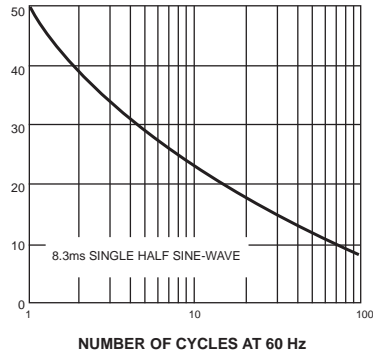
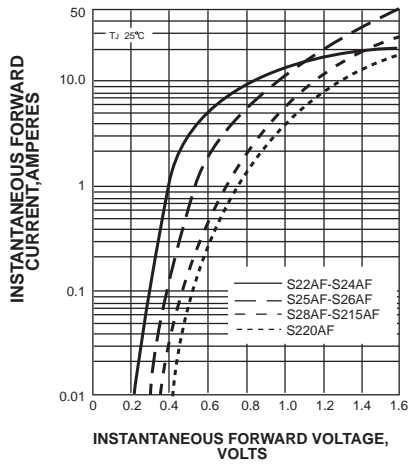


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

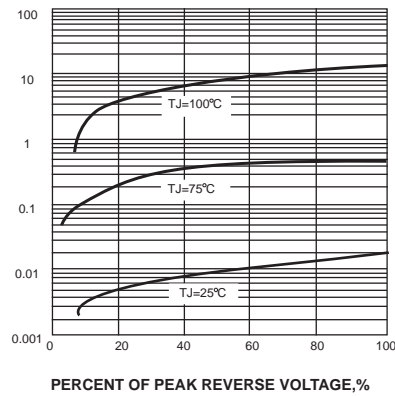
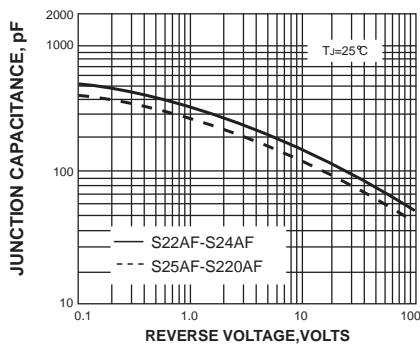


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

