Elektronische Bauelemente

SM120AF~SM1200AF

20 V ~ 200 V

1.0 Amp Surface Mount Schottky Barrier Rectifiers

RoHS Compliant Product

A suffix of "-C" specifies halogen-free and RoHS Compliant

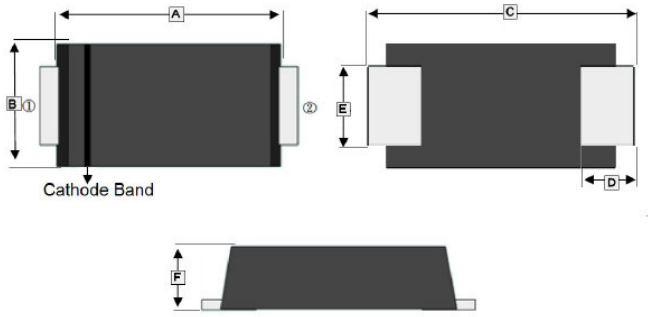
FEATURES

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief
- Low forward voltage drop

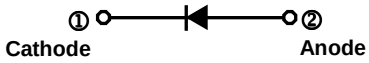
PACKAGING INFORMATION

- Metallurgically bonded construction
- Polarity: Color band denotes cathode end
- Case: Molded plastic
- Epoxy: UL94-V0 rate flame retardant
- Weight: 0.032 grams (approximately)

SMAF



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	3.95	4.60	D	0.75	1.50
B	2.25	2.95	E	1.25	1.65
C	4.80	5.60	F	0.90	1.10



PACKAGE INFORMATION

Package	MPQ	Leader Size
SMAF	3K	7 inch

ORDER INFORMATION

Part Number	Type
SM120AF~SM1200AF	Lead (Pb)-free
SM120AF-C~SM1200AF-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.)

Parameter		Symbol	Part Number						Unit
			SM 120AF	SM 140AF	SM 160AF	SM 1100AF	SM 1150AF	SM 1200AF	
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	20	40	60	100	150	200	V
Working Peak Reverse Voltage		V_{RMS}	14	28	42	70	105	140	V
Maximum DC Blocking Voltage		V_R	20	40	60	100	150	200	V
Maximum Instantaneous Forward Voltage @ 1A		V_F	0.45	0.5	0.7	0.85	0.87	0.9	V
Maximum Average Forward Rectified Current, See Fig.1		I_O	1						A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	30						A
Maximum Reverse Current [2]	T_C=25°C	I_R	0.5			0.2			mA
	T_C=100°C		10			5			
Typical Thermal Resistance		$R_{\theta JA}$	120						℃ / W
Typical Thermal Resistance		$R_{\theta JC}$	90						
Diode Junction Capacitance (Typ.) [1]		C_J	90	70	60	50	35		pF
Operating Temperature Range		T_J	-50 ~ 125				-50~150		℃
Storage Temperature Range		T_{STG}	-50~150						℃

Notes:

1. f=1MHz and applied 4V DC reverse voltage
2. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≦ 2.0%.

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RATINGS AND CHARACTERISTIC CURVES

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

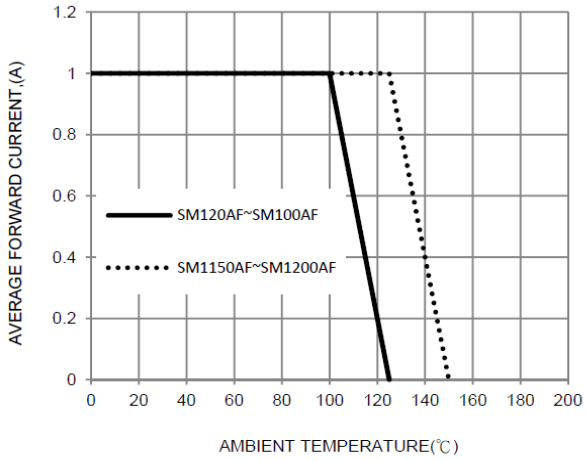

FIG. 2-TYPICAL FORWARD CHARACTERISTICS

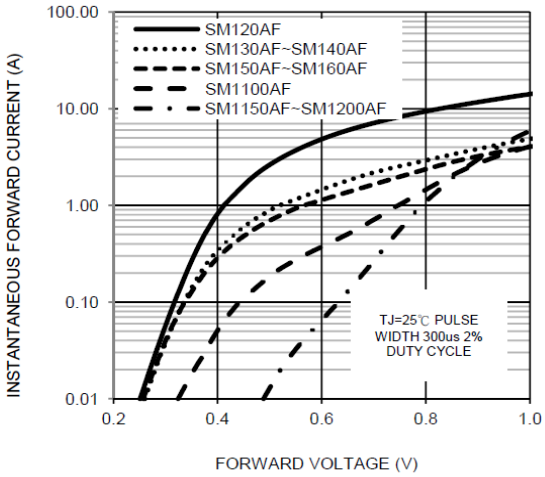

FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

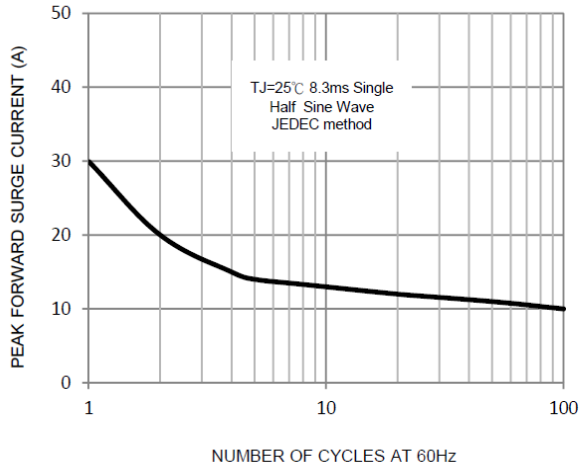

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

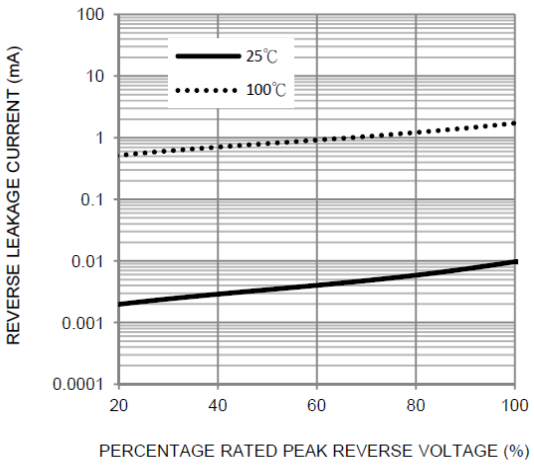

FIG. 5-TYPICAL JUNCTION CAPACITANCE