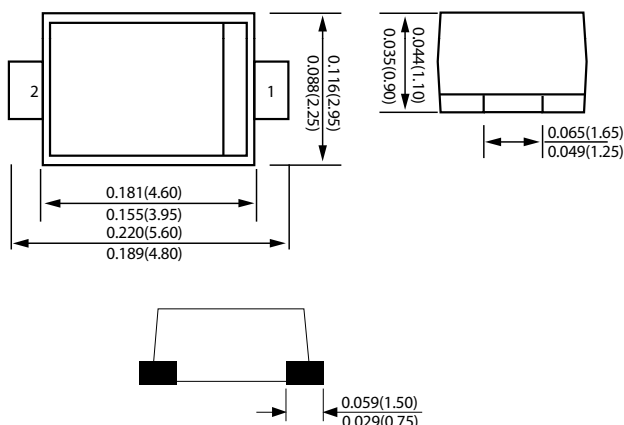


DO-221AC(SMAF)

Dimensions in inches and (millimeters)

Ordering Information	
Part Number	Remark
SM5xxAF	General
SM5xxAF-H	Halogen Free
SM5xxAF-Q	Automotive

PRIMARY CHARACTERISTICS	
I_F	5A
V_{RRM}	20~200V
I_{FSM}	100A
V_F	0.55V, 0.70V, 0.85V, 0.87V, 0.90V
$T_J \text{ max}$	125°C , 150°C

Features

- Low profile package
- Ideal for automated placement
- Guard Ring for over voltage protection
- Low forward voltage drop
- Component in accordance to RoHS 2002/95/EC
- AEC-Q101 qualified

Mechanical Data

- Case: DO-221AC (SMAF)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.032 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	SM5 20AF	SM5 30AF	SM5 40AF	SM5 50AF	SM5 60AF	SM5 80AF	SM5 100AF	SM5 150AF	SM5 200AF	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current	I _F	5.0									A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	100.0									A
Maximum Instantaneous Forward Voltage IF=5A @ 25°C	V _F	0.55			0.70		0.85		0.87	0.90	V
Maximum DC Reverse Current @ Tc=25°C at Rated DC Blocking Voltage @ Tc=100°C	I _R	0.5 10					0.2 5.0				mA
Typical Junction Capacitance(NOTE1)	C _j	300			210		170		150	110	pF
Typical Thermal Resistance(NOTE2)	R _{θJa} R _{θJC}	120 90									°C/W
Operating Temperature Range	T _J	-55 to +125					-55 to +150				°C
Storage Temperature Range	T _{STG}	-55 to +150									°C

NOTES:

1. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC

2. Device mounted on FR-4 substrate, 1"×1", 2oz, single-sided, PC boards with 0.1"×0.15" copper pad.

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

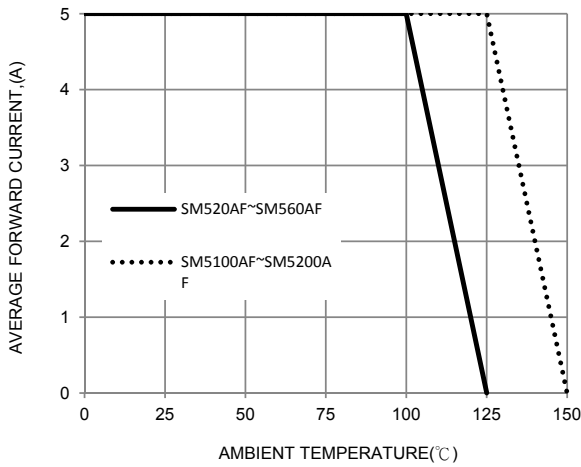


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

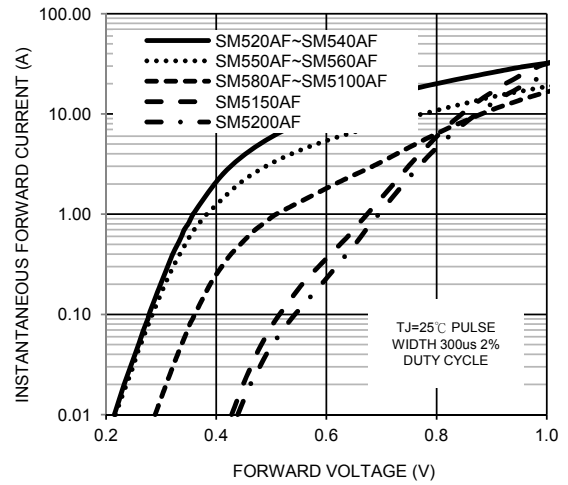


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

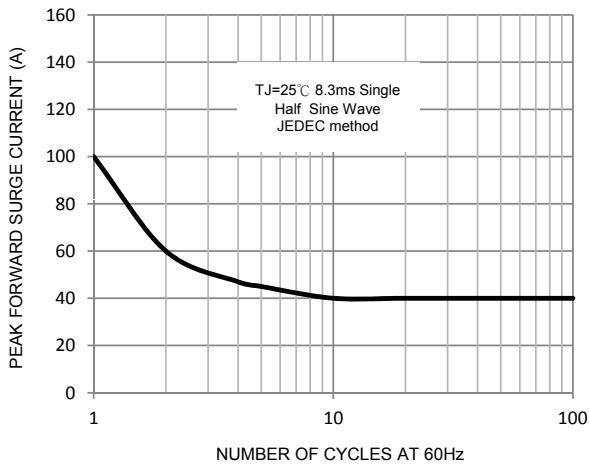


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

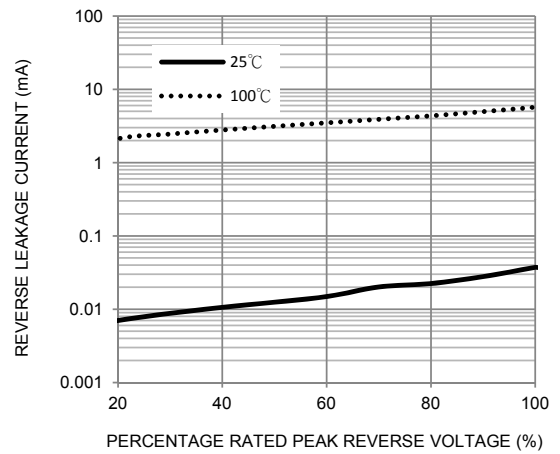


FIG. 5-TYPICAL JUNCTION CAPACITANCE

