

DO-214AB(SMC)

Dimensions in inches and (millimeters)



Ordering Information

Part Number	Remark
SM20xxC	General
SM20xxC-H	Halogen Free
SM20xxC-Q	Automotive

PRIMARY CHARACTERISTICS

I_F	20A
V_{RRM}	20~200V
I_{FSM}	250A
V_F	0.60V, 0.75V, 0.85V, 0.92V
$T_J \text{ max}$	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-214AB (SMC)
- 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: 0.231 grams (approximate)

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

PARAMETER	SYMBOL	SM20 20C	SM20 30C	SM20 40C	SM20 50C	SM20 60C	SM20 80C	SM20 100C	SM20 150C	SM20 200C	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	20.0									A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	250.0									A
Maximum Instantaneous Forward Voltage IF=20A @ 25°C	V _F	0.60			0.75		0.85		0.92		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	1,300			850		600		400		pF
Typical Thermal Resistance(NOTE2)	R _{θJa} R _{θJc}	50 30									°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 0.15"*0.26" copper pad.

Schottky Barrier Rectifiers

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

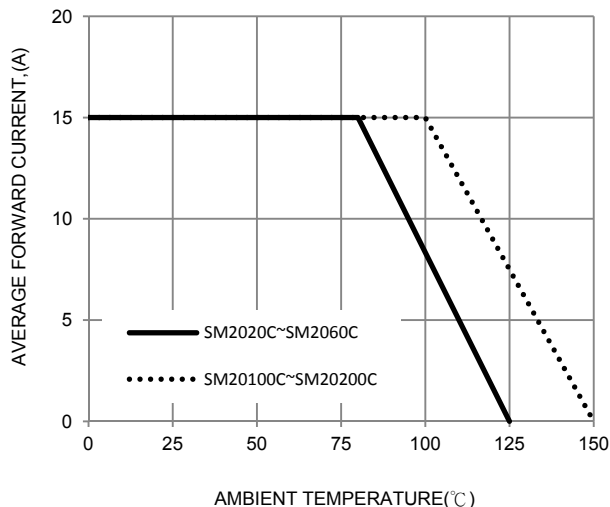


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

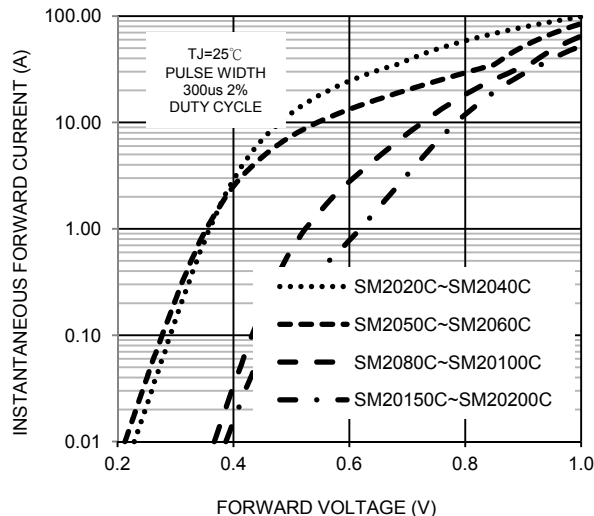


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

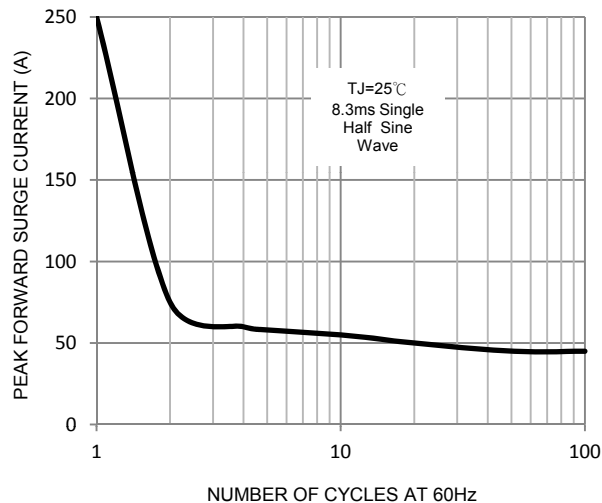


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

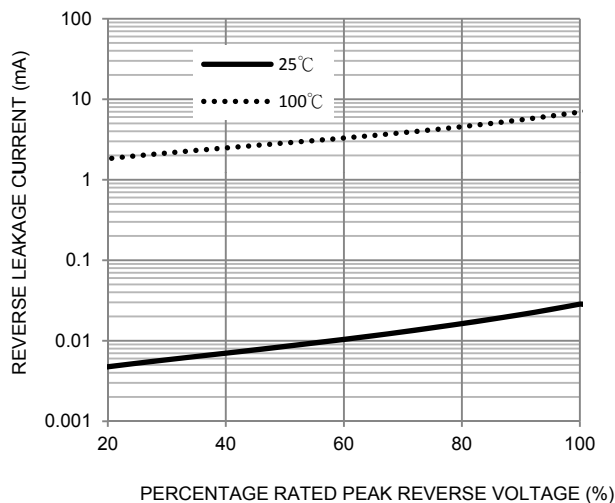


FIG. 5-TYPICAL JUNCTION CAPACITANCE

