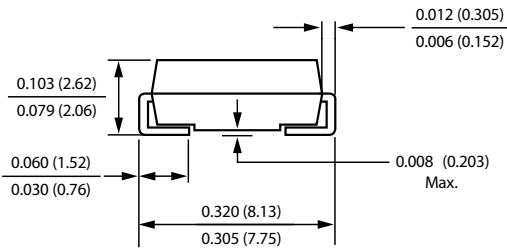
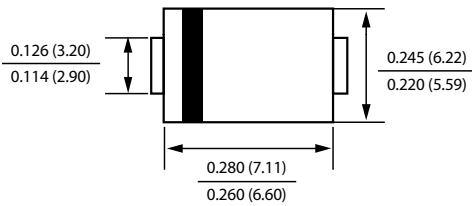




# SM1520C thru SM15200C



## Schottky Barrier Rectifiers



### DO-214AB(SMC)

Dimensions in inches and (millimeters)

Ordering Information	
Part Number	Remark
SM15xxC	General
SM15xxC-H	Halogen Free
SM15xxC-Q	Automotive

PRIMARY CHARACTERISTICS	
$I_F$	15A
$V_{RRM}$	20~200V
$I_{FSM}$	200A
$V_F$	0.60V, 0.75V, 0.85V, 0.92V
$T_J$ 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	SM15 20C	SM15 30C	SM15 40C	SM15 45C	SM15 50C	SM15 60C	SM15 80C	SM15 100C	SM15 150C	SM15 200C	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	45	50	60	80	100	150	200	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	31.5	35	42	56	70	105	140	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	45	50	60	80	100	150	200	V
Maximum average forward rectified current	$I_F$	15.0										A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	200.0										A
Maximum Instantaneous Forward Voltage IF=15A @ 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)	$C_j$	700			620		420		300			pF
Typical Thermal Resistance(NOTE2)	$R_{\theta Ja}$ $R_{\theta Jc}$	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

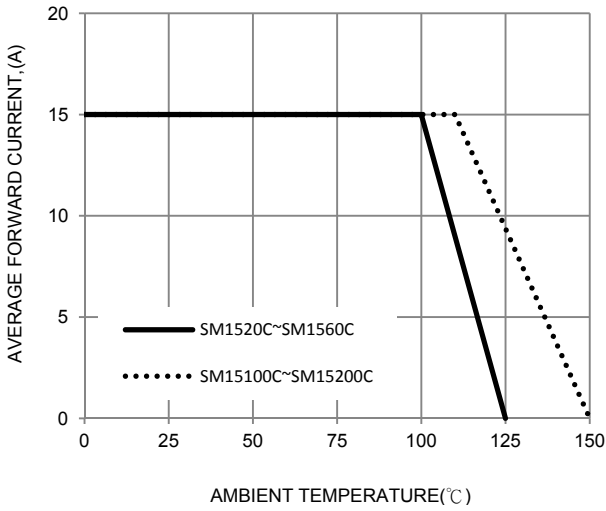


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

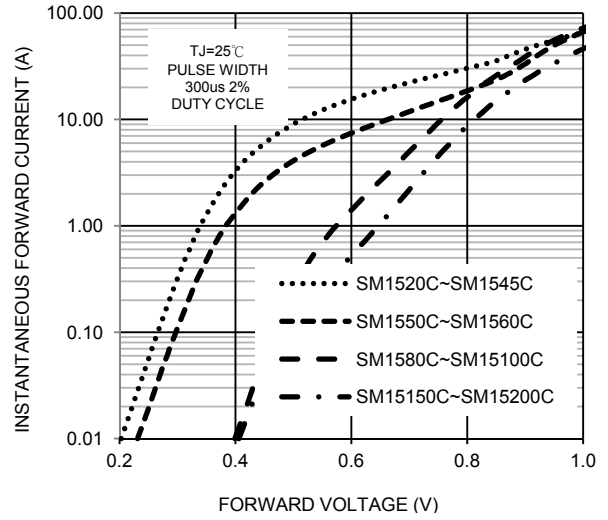


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

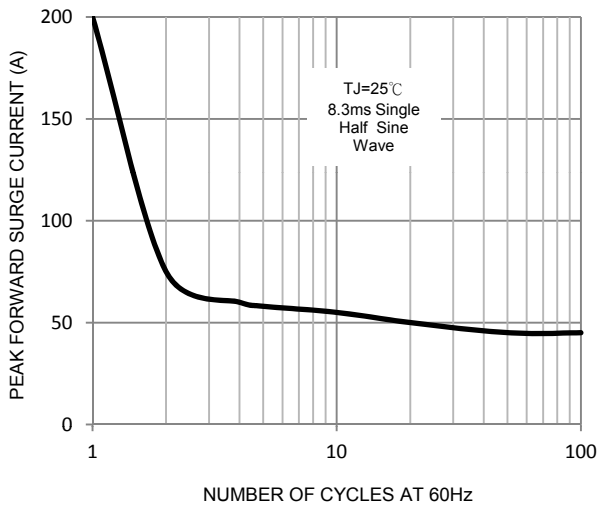


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

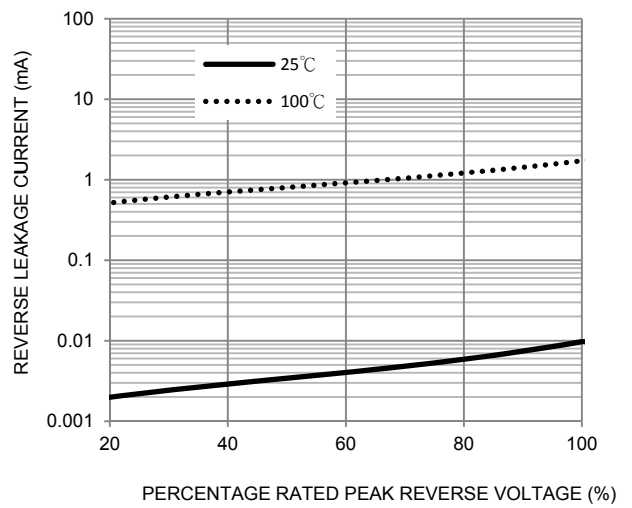


FIG. 5-TYPICAL JUNCTION CAPACITANCE

