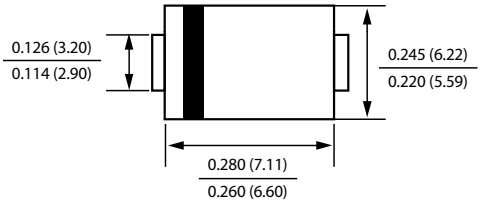
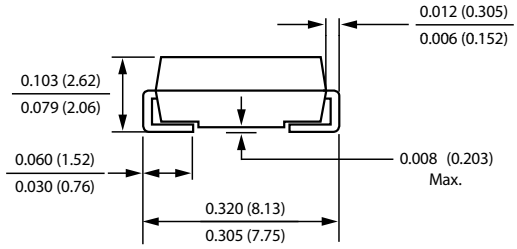
SM1520C thru SM15200C

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 Date

- 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	SM1520C	SM1530C	SM1540C	SM1545C	SM1550C	SM1560C	SM1580C	SM15100C	SM15150C	SM15200C	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.

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FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

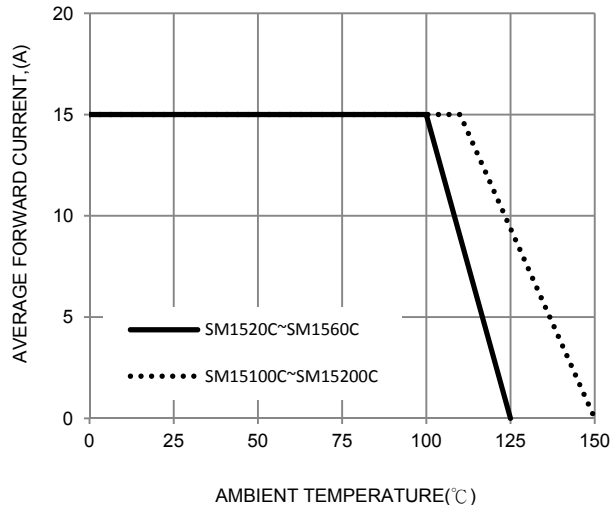

FIG. 2-TYPICAL FORWARD CHARACTERISTICS

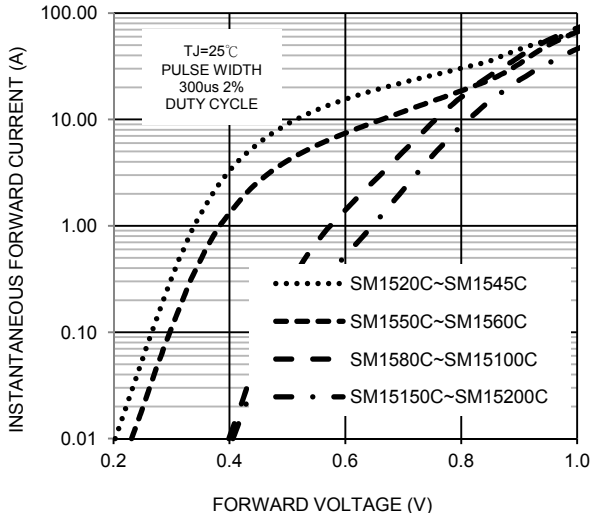

FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

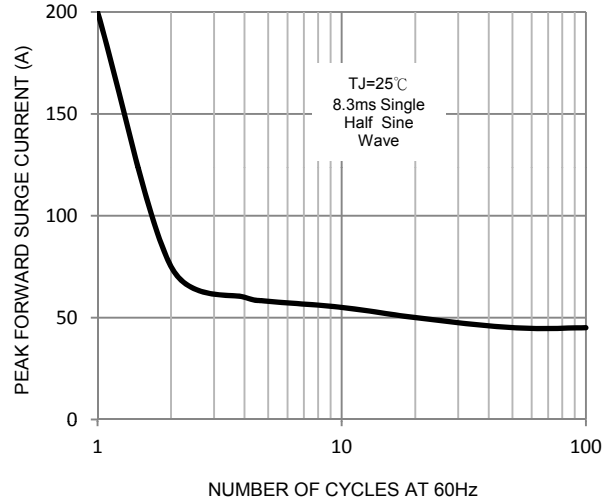

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

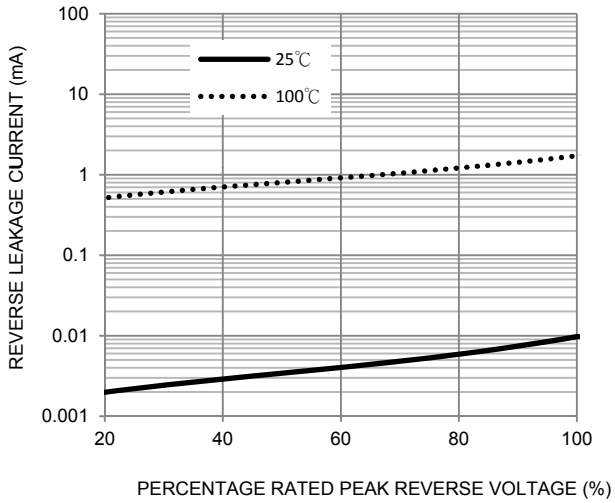

FIG. 5-TYPICAL JUNCTION CAPACITANCE