



# P10L50C



## Excellent Schottky Barrier Rectifiers



**DO-214AB(SMC)**

Features
<ul style="list-style-type: none"> <li>• Low profile package</li> <li>• Ideal for automated placement</li> <li>• Guard Ring for over voltage protection</li> <li>• Low forward voltage drop</li> <li>• Component in accordance to RoHS 2002/95/EC</li> <li>• AEC-Q101 qualified</li> </ul>

Ordering Information		
Part No.	Package	Packing
P10L50C	SMC	3000 / Tape & Reel

Device P/N	
Part Number	Remark
P10L50C	General
P10L50C-H	Halogen Free
P10L50C-Q	Automotive

Primary Characteristics		
$I_F$	10	A
$V_{RRM}$	45	V
$I_{FSM}$	150	A
$V_F$	0.47	V
$T_J \text{ max}$	150	°C

Mechanical Data
<ul style="list-style-type: none"> <li>• Case: DO-214AB (SMC)</li> <li>• Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0</li> <li>• Terminals: Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208</li> <li>• Polarity: Cathode Band</li> <li>• Weight: 0.231 grams (approximate)</li> </ul>

Maximum Ratings ( $T_A=25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	P10L50C	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	45	V
Maximum RMS voltage	$V_{RMS}$	31.5	V
Maximum DC blocking voltage	$V_{DC}$	45	V
Maximum average forward rectified current	$I_F$	10	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150	A
Maximum Instantaneous Forward Voltage $I_F=3A @ 25^\circ\text{C}$ $I_F=10A @ 25^\circ\text{C}$	$V_F$	0.34 Typ. 0.47 Max.	V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	0.5 20	mA
Typical Junction Capacitance(NOTE1)	$C_j$	630	pF
Typical Thermal Resistance	$R_{\theta JC}$	20	°C/W
Operating Temperature Range	$T_J$	-55 to +150	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°C
Marking Code		P10L50C、10L50C	

**NOTES:**

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

### Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

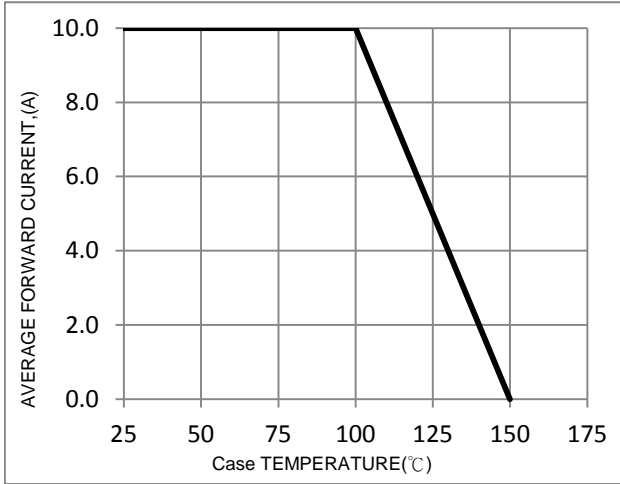


FIG. 2-Typical Forward Characteristics

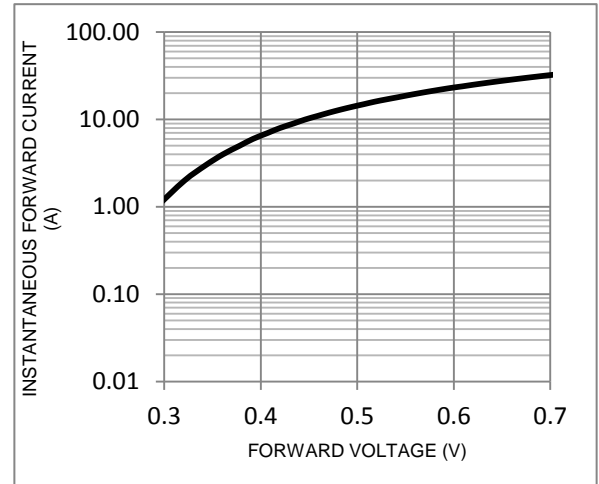


FIG. 3-Maximum Non-Repetitive Forward Surge Current

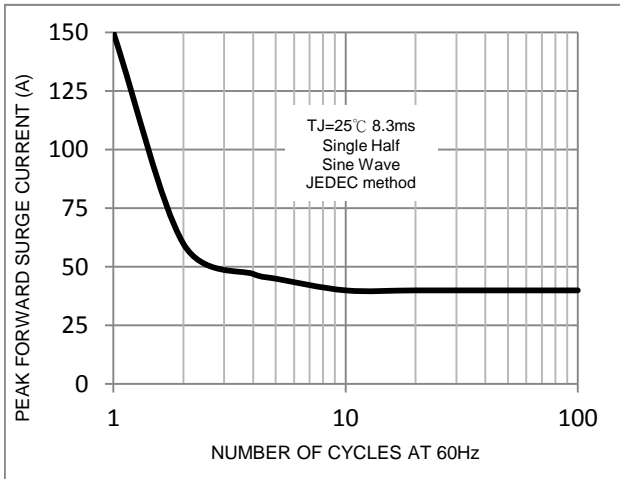


FIG. 4-Typical Reverse Characteristics

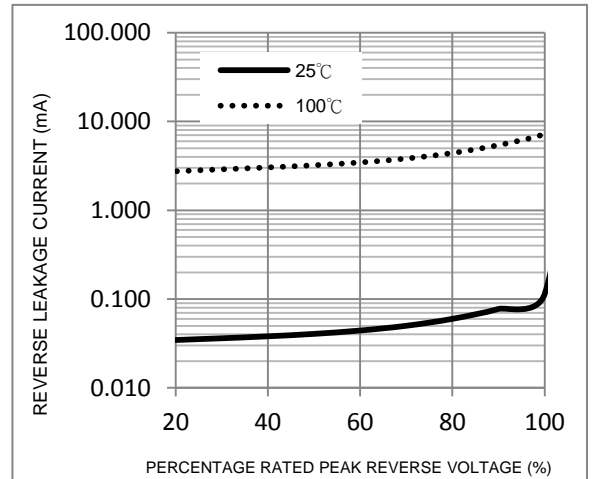
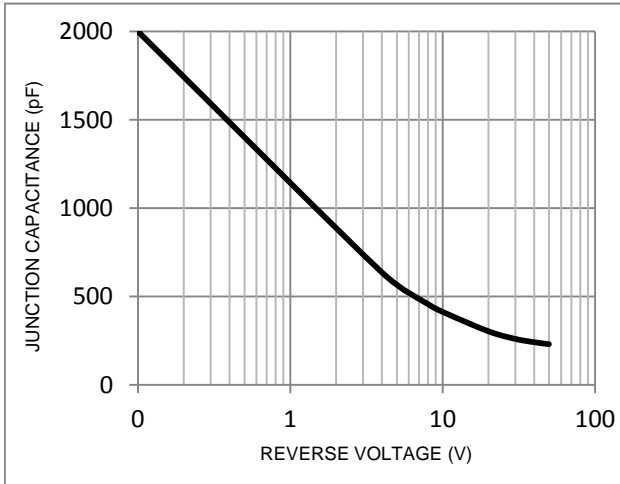
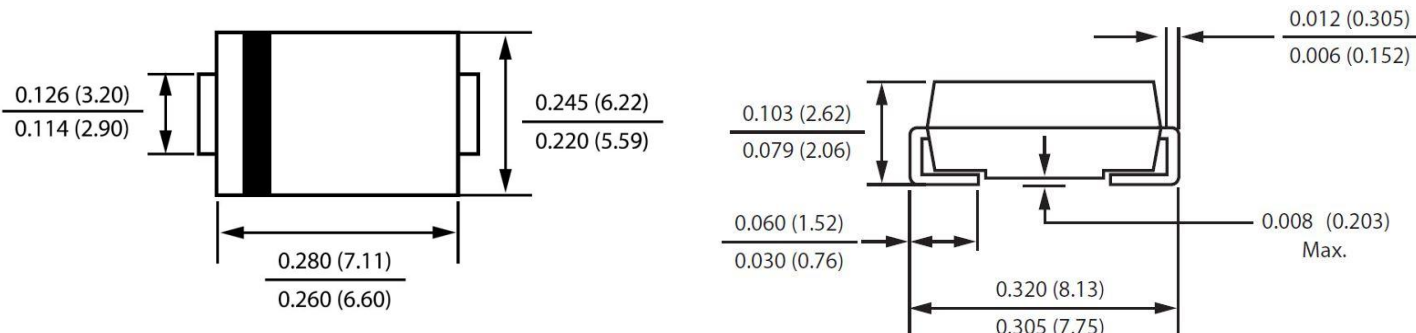


FIG. 5-Typical Junction Capacitance



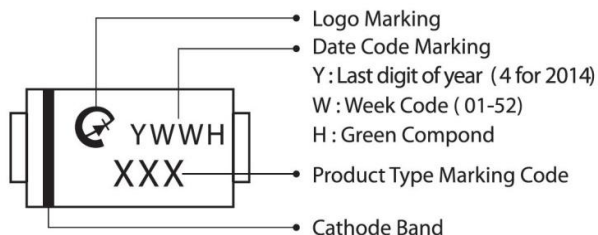
### Package Outline Dimensions



### DO-214AB(SMC)

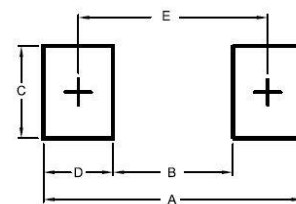
Dimensions in inches and (millimeters)

### Marking Information



### Suggested Pad Layout

Dimension	Outline	SMC (DO-214AB)
A		9.40
B		4.40
C		3.30
D		2.50
E		6.80



### Tape & Reel Specification

ITEM	SYMBOL	SMC (mm)
		DO-214AB
Carrier width	A	6.3(max)
Carrier length	B	8.6(max)
Carrier depth	C	2.9(max)
Sprocket hole	d	1.50±0.1
Reel outside diameter	D	330±2.0
Feed hole diameter	D0	13.5±1
Reel inner diameter	D1	50 (min.)
Sprocket hole position	E	1.75±0.1
Punch hole position	F	7.5±0.05
Sprocket hole pitch	P	8.0±0.1
Sprocket hole pitch	Po	4.0±0.1
Embossment center	P1	2.0±0.05
Overall tape thickness	T	0.6 (max)
Tape width	W	16.0±0.3
Reel width	W2	22.4 (max)
Reel width	W1	18.4 (max)

