



# T10E120C



## Excellent Schottky Barrier Rectifiers



**DO-214AB(SMC)**

### 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

### Ordering Information

Part No.	Package	Packing
T10E120C	SMC	3000 / Tape & Reel

### Device P/N

Part Number	Remark
T10E120C	General
T10E120C-H	Halogen Free
T10E120C-Q	Automotive

### Primary Characteristics

$I_F$	10	A
$V_{RRM}$	120	V
$I_{FSM}$	150	A
$V_F$	0.79	V
$T_J \text{ max}$	150	°C

### 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	T10E120C	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	120	V
Maximum RMS voltage	$V_{RMS}$	84	V
Maximum DC blocking voltage	$V_{DC}$	120	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 IF=2A @ 25°C IF=10A @ 25°C	$V_F$	0.60 Typ. 0.79 Max.	V
Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=100°C	$I_R$	0.2 20	mA
Typical Junction Capacitance(NOTE1)	$C_j$	685	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		T10E120C、10E120C	

### 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

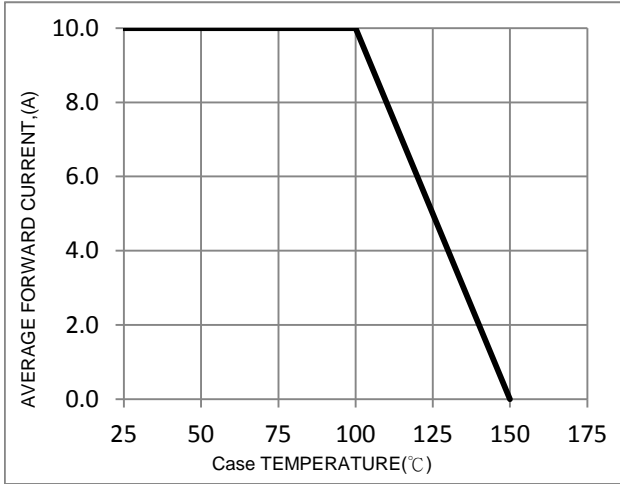


FIG. 2-Typical Forward Characteristics

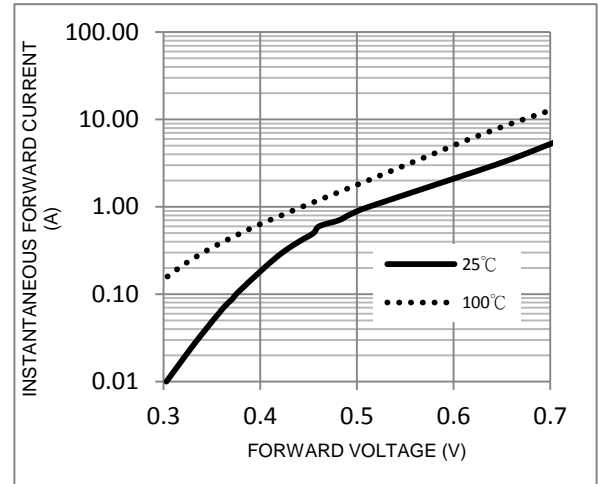


FIG. 3-Maximum Non-Repetitive Forward Surge Current

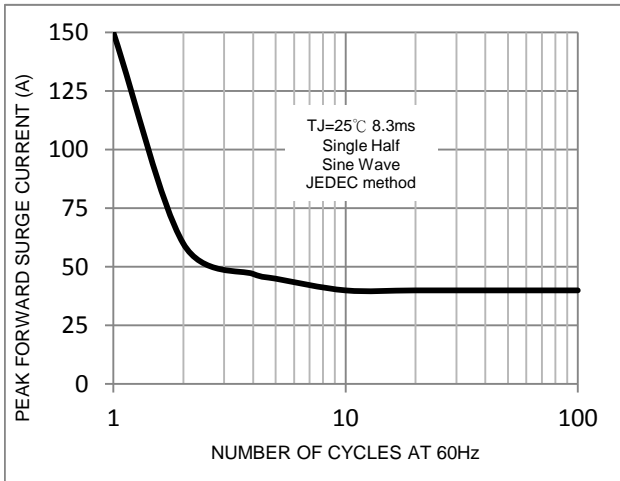


FIG. 4-Typical Reverse Characteristics

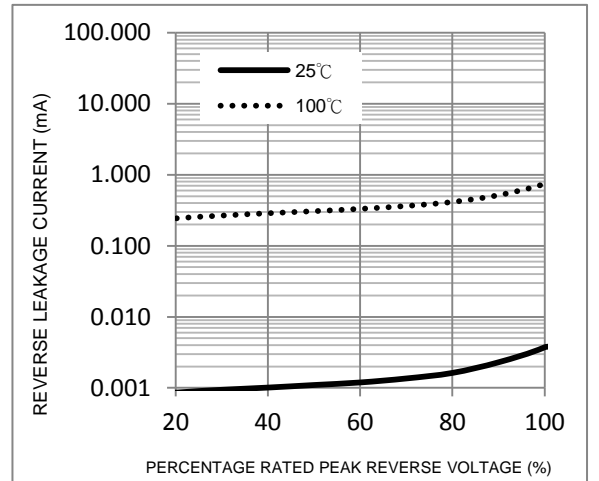
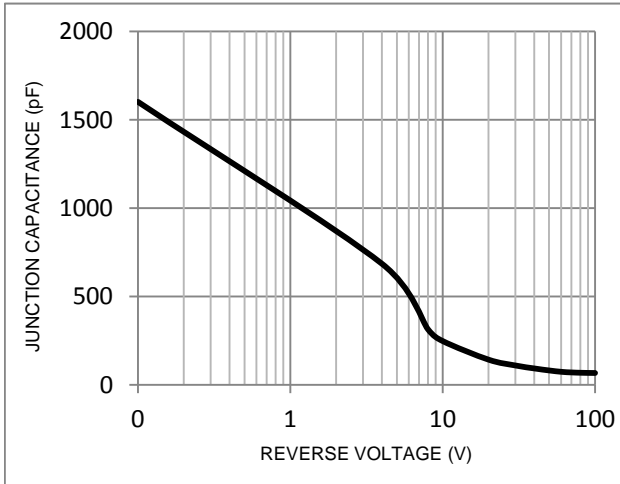
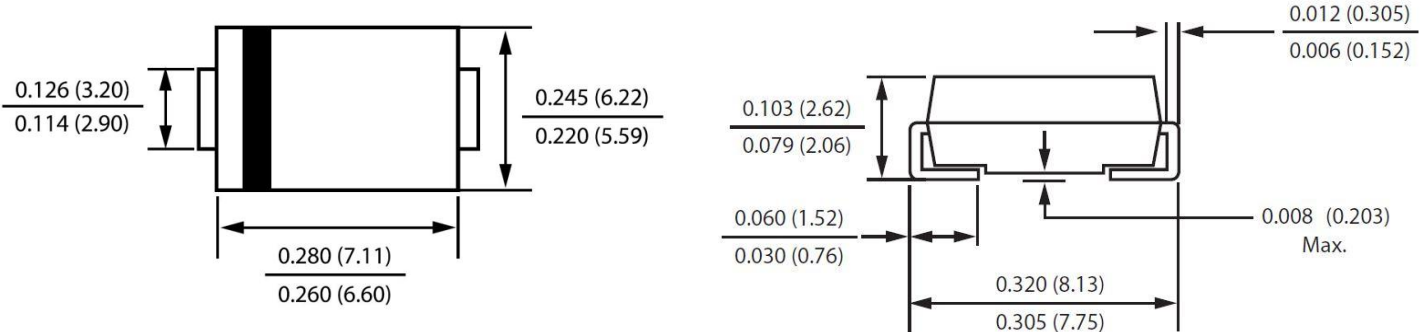


FIG. 5-Typical Junction Capacitance



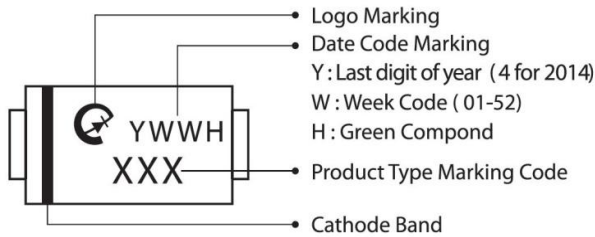
### Package Outline Dimensions



### DO-214AB(SMC)

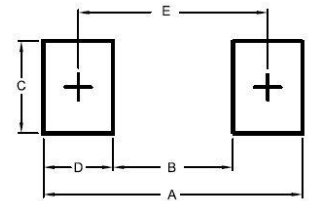
Dimensions in inches and (millimeters)

### 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)

