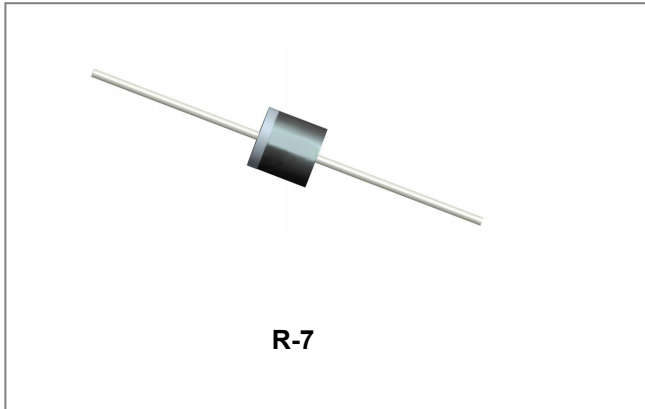


## ST3545AX-D/ST3545AX-C SCHOTTKY BARRIER RECTIFIER



### Features

- Ultralow forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Trench MOS Schottky technology
- Terminals finish: Tin Lead-free plated
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

### Maximum Ratings (limiting values, at 25 °C unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	-	45	V
Average Rectified Forward Current	$I_{F(AV)}$	$T_c=116^{\circ}\text{C}$ , In DC	35	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse, $T_c=25^{\circ}\text{C}$	350	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 35A, Pulse, $T_J = 25^{\circ}\text{C}$	0.48	0.54	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ , $T_J = 25^{\circ}\text{C}$	0.03	0.2	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ , $T_J = 125^{\circ}\text{C}$	20	55	mA
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}$ , $T_c = 25^{\circ}\text{C}$ $f_{SIG} = 1\text{MHz}$	5000	-	pF

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	In DC Forward Mode, without reverse bias, $t \leq 1$ hour	-55 to +200	$^{\circ}\text{C}$
Storage Temperature	$T_{\text{stg}}$	-	-55 to +150	$^{\circ}\text{C}$
Approximate Weight	wt	ST3545AX-D ST3545AX-C	2.6 3	g
Typical Thermal Resistance	$R_{\theta\text{JC}}$	-	1.8	$^{\circ}\text{C/W}$

**Ratings and Characteristics Curves**

Figure 1 Typical Forward Characteristics

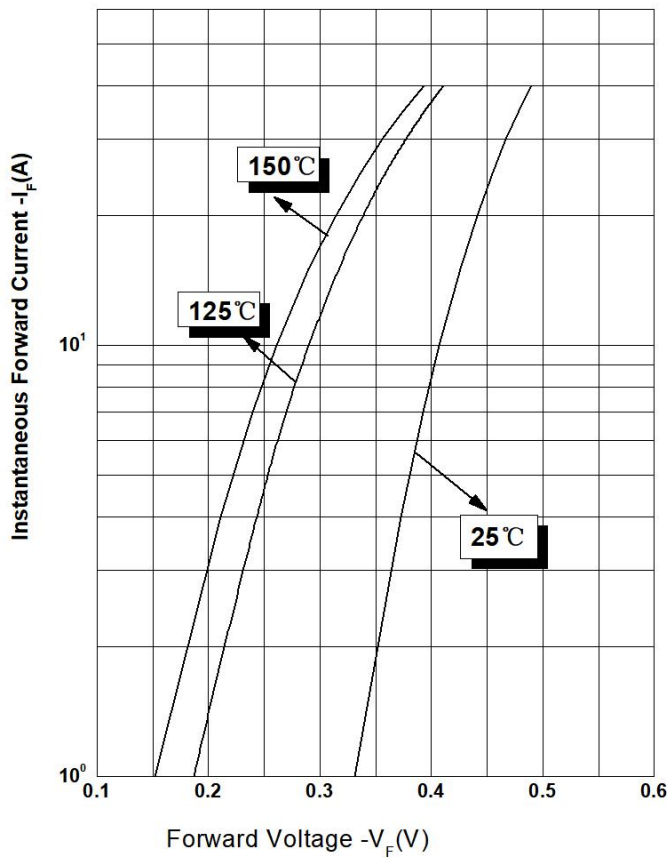


Figure 2 Typical Reverse Characteristics

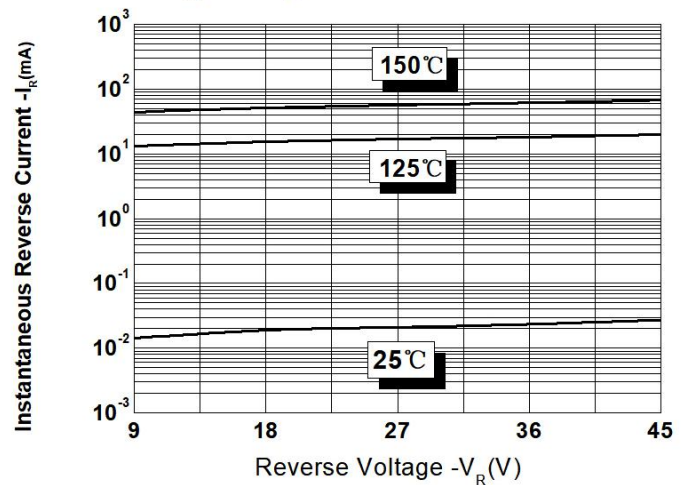
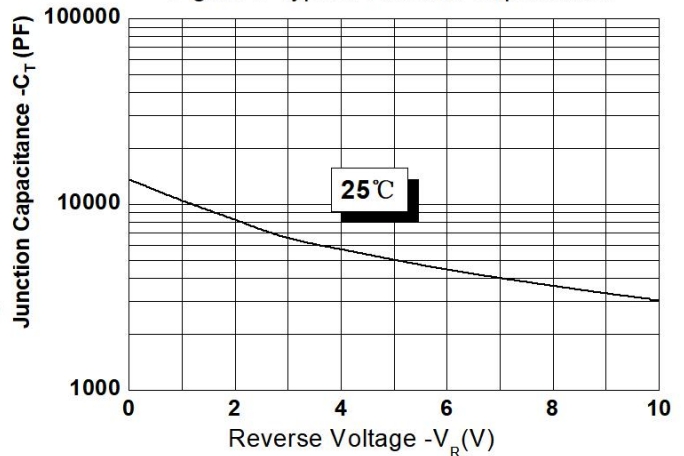
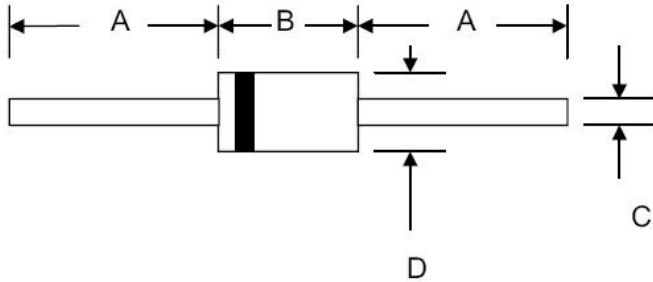


Figure 3 Typical Junction Capacitance

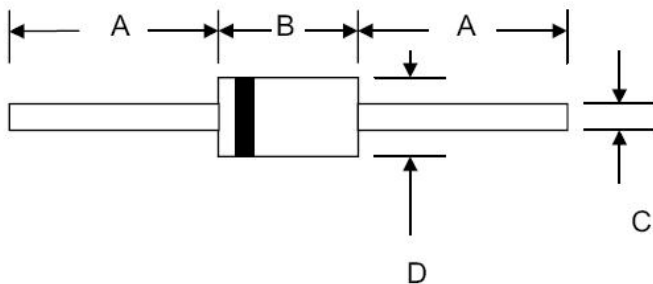


**Mechanical Dimensions R-7(ST3545AX-D)**



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	15.00	-	0.590	-
B	8.60	9.10	0.340	0.360
C	1.90	2.10	0.075	0.083
D	8.60	9.10	0.340	0.360

**Mechanical Dimensions R-7(ST3545AX-C)**



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	24.5	-	0.965	-
B	8.60	9.10	0.340	0.360
C	1.90	2.10	0.075	0.083
D	8.60	9.10	0.340	0.360

### Ordering Information

Device	Package	Shipping
ST3545AX-D	R-7(Pb-Free)	800pcs / reel
ST3545AX-C	R-7(Pb-Free)	800pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

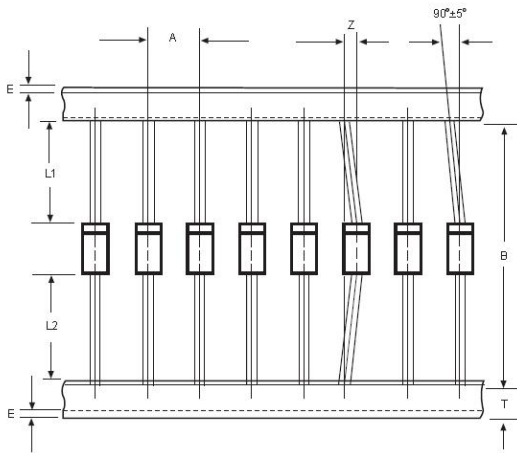
### Marking Diagram



Where XXXXX is YYWWL

S = Device Type  
T = Ultralow VF  
35 = Forward Current (25A)  
45 = Reverse Voltage (45V)  
AX = Package type  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

### Carrier Tape Specification R-7



SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0



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