

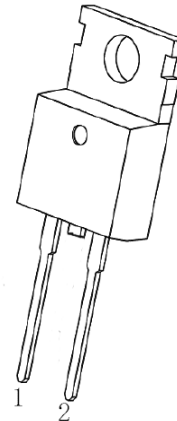


## Silicon Carbide Schottky Diode

### ➤ Features

VR	IF	VF
650V	10A	1.4V

### ➤ Pin Configuration



### ➤ Description

- 650V Schottky Rectifier
- High Frequency Operation
- Extremely Fast Switching
- Positive Temperature Coefficient on  $V_F$

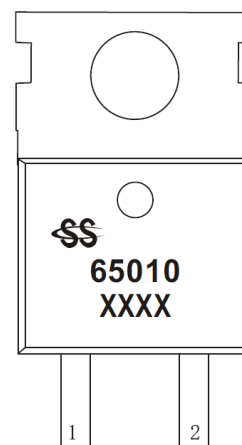


### ➤ Applications

- Power Supplies
- Power Factor Correction
- Motor Drives

### ➤ Ordering Information

Device	Package	Shipping
SSC65010AT3	TO220-2L	1K/Box



Marking

(XXXX: Year/Week)



➤ **Absolute Maximum Ratings**(TA=25°C unless otherwise noted)

Symbol	Parameter		Ratings	Unit
V <sub>RRM</sub>	Repetitive Peak Reverse Voltage		650	V
V <sub>RSM</sub>	Surge Peak Reverse Voltage		650	V
V <sub>DS</sub>	DC Blocking Voltage		650	V
I <sub>F</sub>	Continuous Forward Current	T <sub>c</sub> =150°C	10	A
I <sub>FRM</sub>	Repetitive Peak Forward Surge Current <sup>A</sup>		45	A
I <sub>FSM</sub>	Non-Repetitive Peak Forward Surge Current <sup>A</sup>		90	A
I <sub>F MAX</sub>	Non-Repetitive Peak Forward Surge Current <sup>B</sup>		860	A
P <sub>TOT</sub>	Power Dissipation	T <sub>c</sub> =25°C	136	W
T <sub>J</sub> T <sub>STG</sub>	Operating Junction and Storage Temperature		-55~+175	°C

➤ **Thermal Resistance Ratings**(TA=25°C unless otherwise noted)

Symbol	Parameter	Ratings	Unit
R <sub>θJC</sub>	Thermal Resistance Junction-to-Case	1.1	°C/W

Note:

A. T<sub>c</sub>=25°C,t=10ms,Half Sine Wave;

B. T<sub>c</sub>=25°C,t=10us,Pulse;



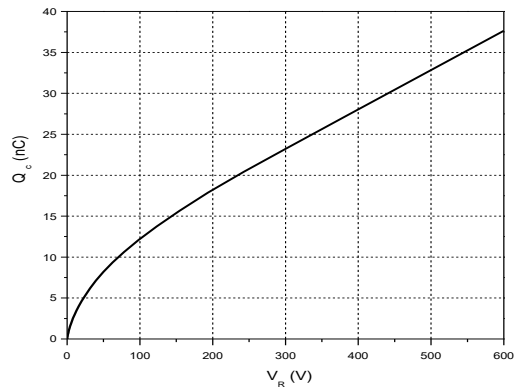
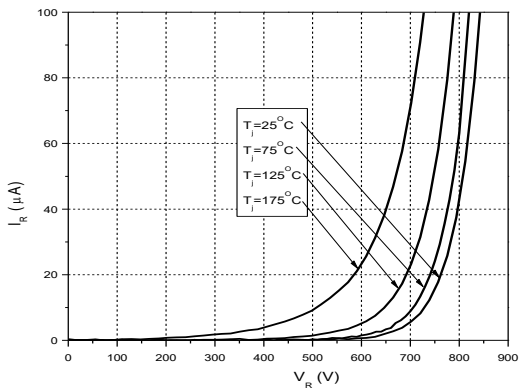
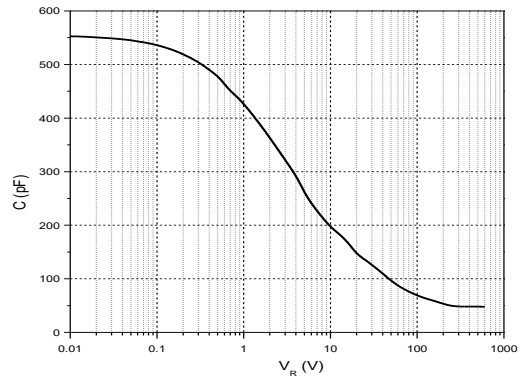
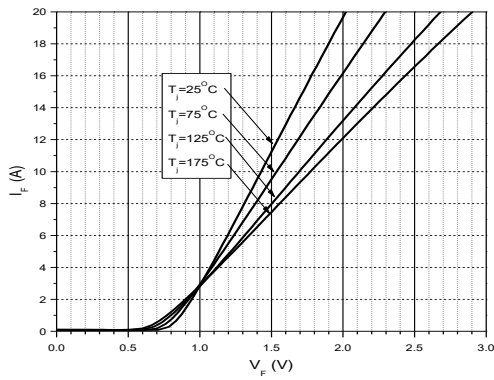
## SSC65010AT3

➤ **Electronics Characteristics**(TA=25°C unless otherwise noted)

Symbol	Parameter	Test Conditions	Typ.	Max.	Unit
V <sub>F</sub>	Forward Voltage	IF=10A TJ=25°C IF=10A TJ=175°C	1.4 1.75	1.7 2.1	V
I <sub>R</sub>	Reverse Current	VR=650V TJ=25°C VR=650V TJ=175°C	2 40	20 200	uA
Q <sub>C</sub>	Total Charge	VR=400V IF=10A TJ=25°C	28		nC
C	Total Capacitive	VR=0V TJ=25°C f=1MHz VR=200V TJ=25°C f=1MHz VR=400V TJ=25°C f=1MHz	550 53 48		pF
E <sub>C</sub>	Capacitance Stored Energy	VR=400V	7		uJ

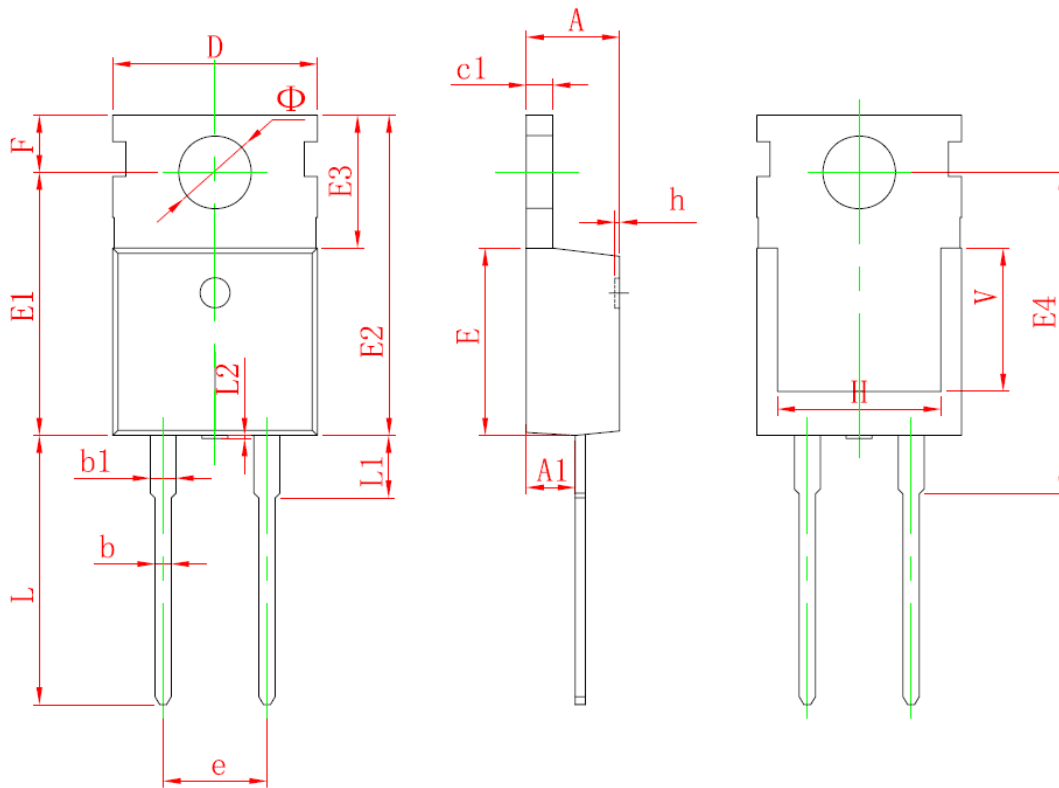


➤ Typical Characteristics (TA=25°C unless otherwise noted)





➤ Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.400	4.600	0.173	0.181
A1	2.250	2.550	0.089	0.100
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.330	0.650	0.013	0.026
c1	1.200	1.400	0.047	0.055
D	9.910	10.250	0.390	0.404
E	8.950	9.750	0.352	0.384
E1	12.700	13.000	0.500	0.512
E2	15.500	15.800	0.610	0.622
E3	6.350	6.650	0.250	0.262
E4	15.750	16.050	0.620	0.632
e	4.980	5.180	0.196	0.204
F	2.650	2.950	0.104	0.116
H	7.900	8.100	0.311	0.319
h	0.000	0.300	0.000	0.012
L	12.900	13.400	0.508	0.528
L1	2.850	3.250	0.112	0.128
L2	0.050	0.300	0.002	0.012
V	6.900 REF.		0.272 REF.	
Φ	3.400	3.800	0.134	0.150



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