

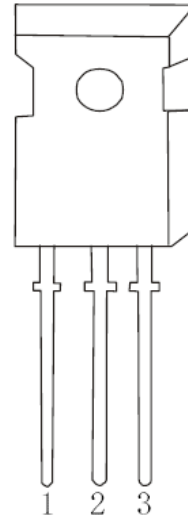


Silicon Carbide Schottky Diode

➤ Features

VR	IF	VF
1200V	10A	1.5V

➤ Pin Configuration

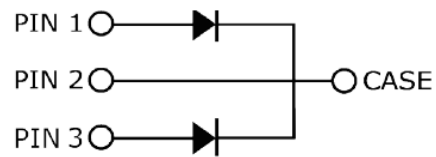


➤ Description

- 1200V Schottky Rectifier
- High Frequency Operation
- Extremely Fast Switching
- Positive Temperature Coefficient on V_F

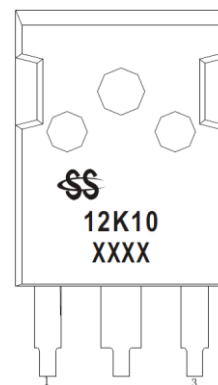
➤ Applications

- Power Supplies
- Power Factor Correction
- Motor Drives



➤ Ordering Information

Device	Package	Shipping
SSC12K10AT2	TO247-3L	0.3K/Box



Marking

(XXXX: Year/Week)



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

Symbol	Parameter		Ratings	Unit
V _{RRM}	Repetitive Peak Reverse Voltage		1200	V
V _{RSM}	Surge Peak Reverse Voltage		1200	V
V _{DS}	DC Blocking Voltage		1200	V
I _F	Continuous Forward Current	T _c =150°C	10	A
I _{FRM}	Repetitive Peak Forward Surge Current ^A		50	A
I _{FSM}	Non-Repetitive Peak Forward Surge Current ^A		95	A
I _{F MAX}	Non-Repetitive Peak Forward Surge Current ^B		600	A
P _{TOT}	Power Dissipation	T _c =25°C	153	W
T _J T _{STG}	Operating Junction and Storage Temperature		-55~+175	°C

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

Symbol	Parameter	Ratings	Unit
R _{θJC}	Thermal Resistance Junction-to-Case	0.98	°C/W

Note:

A. T_c=25°C,t=10ms,Half Sine Wave;

B. T_c=25°C,t=10us,Pulse;



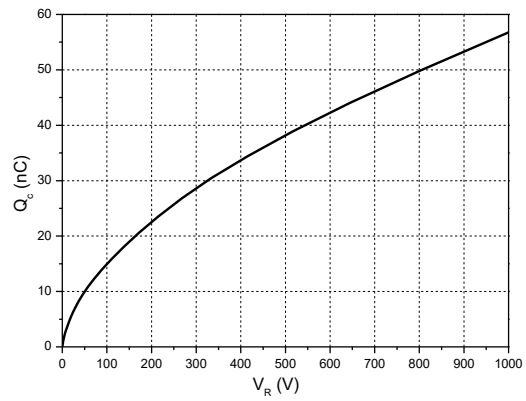
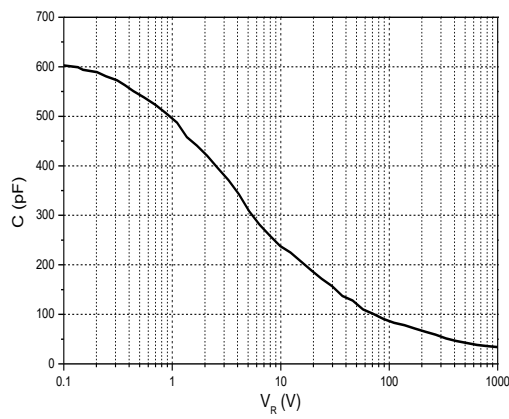
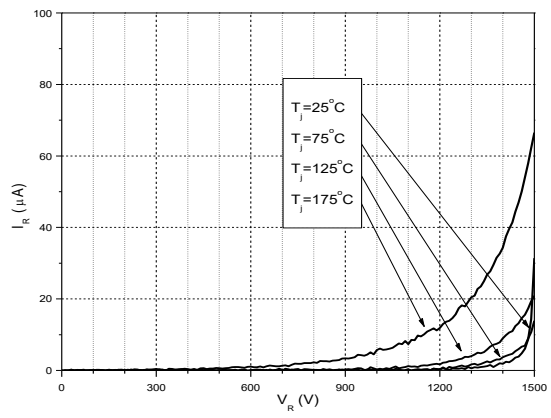
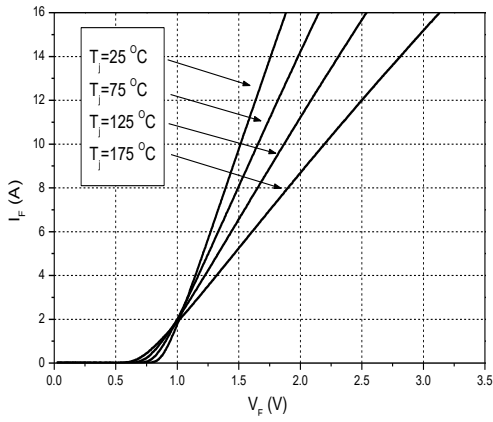
SSC12K10AT2

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

Symbol	Parameter	Test Conditions	Typ.	Max.	Unit
V _F	Forward Voltage	IF=10A TJ=25°C	1.5	1.8	V
		IF=10A TJ=175°C	2.2	3	
I _R	Reverse Current	VR=1200V TJ=25°C	10	50	uA
		VR=1200V TJ=175°C	20	100	
Q _C	Total Charge	VR=400V IF=10A TJ=25°C	50		nC
C	Total Capacitive	VR=0V TJ=25°C f=1MHz	610		pF
		VR=400V TJ=25°C f=1MHz	46		
		VR=800V TJ=25°C f=1MHz	36		
E _C	Capacitance Stored Energy	VR=800V	25		uJ

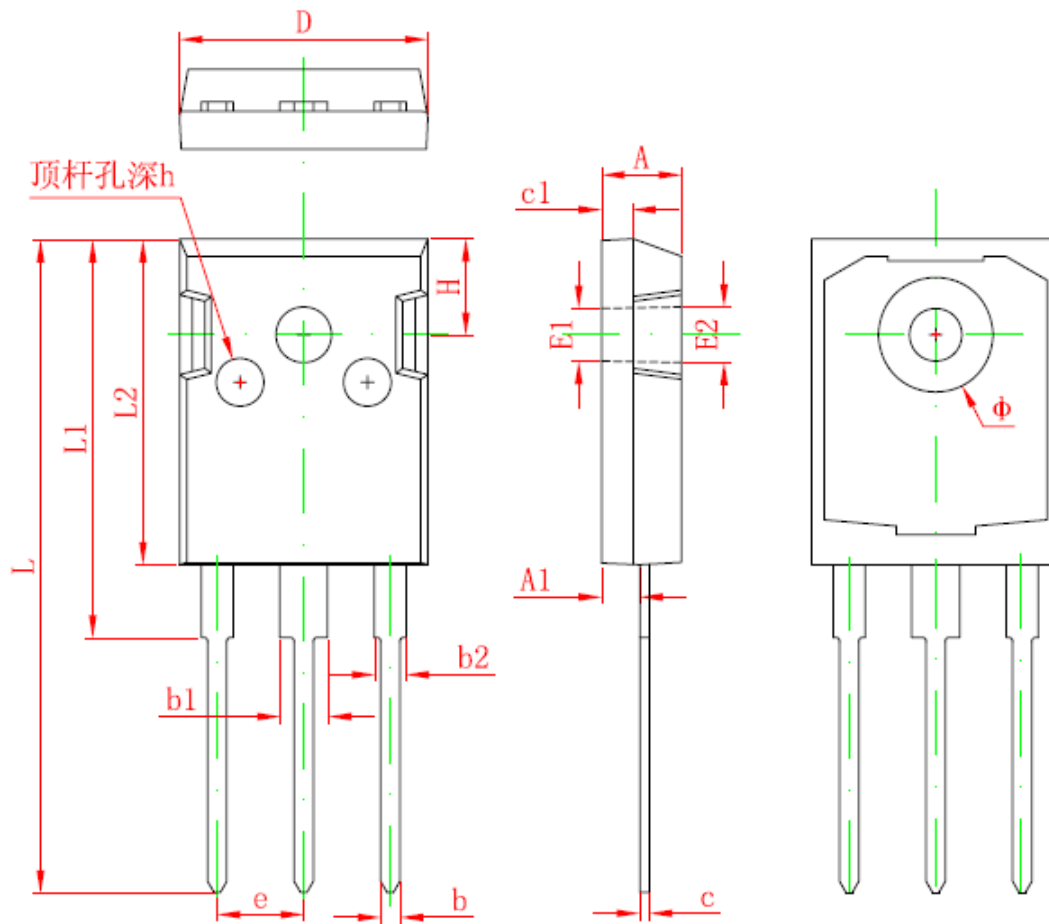


➤ Typical Characteristics (TA=25°C unless otherwise noted)





➤ Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.850	5.150	0.191	0.200
A1	2.200	2.600	0.087	0.102
b	1.000	1.400	0.039	0.055
b1	2.800	3.200	0.110	0.126
b2	1.800	2.200	0.071	0.087
c	0.500	0.700	0.020	0.028
c1	1.900	2.100	0.075	0.083
D	15.450	15.750	0.608	0.620
E1	3.500 REF		0.138 REF	
E2	3.600 REF		0.142 REF	
L	40.900	41.300	1.610	1.626
L1	24.800	25.100	0.976	0.988
L2	20.300	20.600	0.799	0.811
Φ	7.100	7.300	0.280	0.287
e	5.450 TYP		0.215 TYP	
H	5.980 REF		0.235 REF	
h	0.000	0.300	0.000	0.012



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