

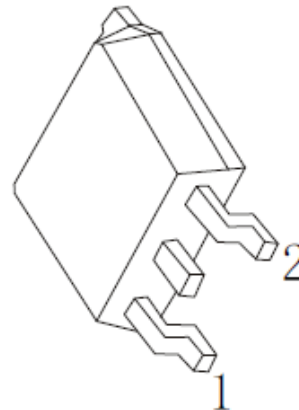


Silicon Carbide Schottky Diode

➤ Features

VR	IF	VF
650V	2A	1.4V

➤ Pin Configuration



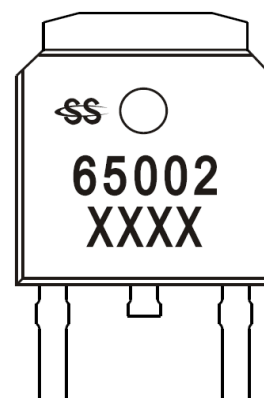
➤ Description

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



➤ Applications

- Power Supplies
- Power Factor Correction
- Motor Drives



Marking

(XXXX: Year/Week)

➤ Ordering Information

Device	Package	Shipping
SSC65002AT8	TO252-2L	2.5K/Reel



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

Symbol	Parameter		Ratings	Unit
V _{RRM}	Repetitive Peak Reverse Voltage		650	V
V _{RSM}	Surge Peak Reverse Voltage		650	V
V _{DS}	DC Blocking Voltage		650	V
I _F	Continuous Forward Current	T _c =150°C	2	A
I _{FRM}	Repetitive Peak Forward Surge Current ^A		11	A
I _{FSM}	Non-Repetitive Peak Forward Surge Current ^A		16	A
I _{F MAX}	Non-Repetitive Peak Forward Surge Current ^B		120	A
P _{TOT}	Power Dissipation	T _c =25°C	39	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	3.8	°C/W

Note:

A. T_c=25°C,t=10ms,Half Sine Wave;

B. T_c=25°C,t=10us,Pulse;



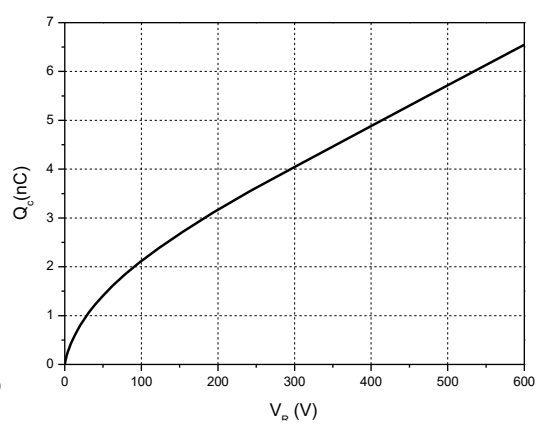
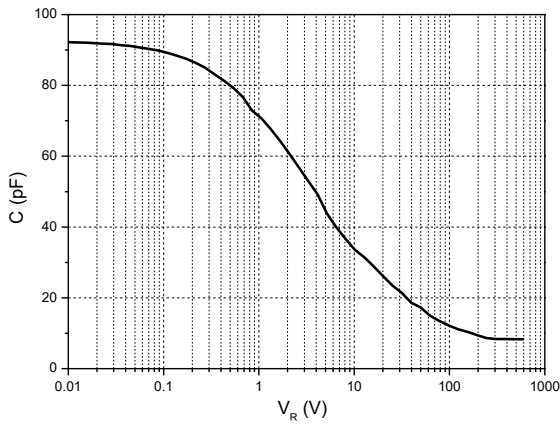
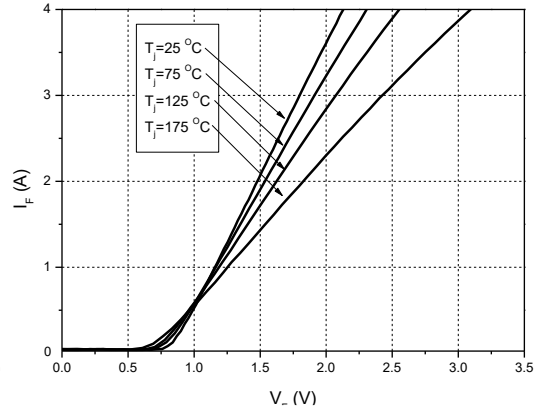
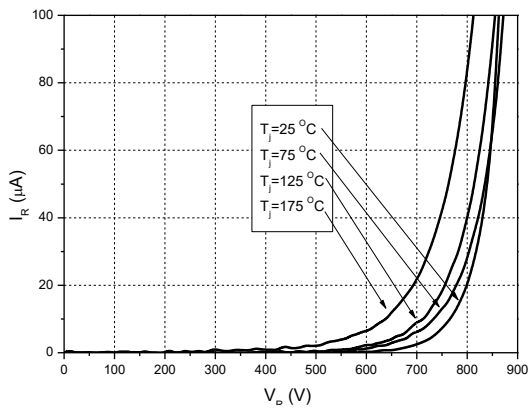
SSC65002AT8

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

Symbol	Parameter	Test Conditions	Typ.	Max.	Unit
V _F	Forward Voltage	IF=2A TJ=25°C	1.4	1.8	V
		IF=2A TJ=175°C	1.8	2.1	
I _R	Reverse Current	VR=650V TJ=25°C	1	20	uA
		VR=650V TJ=175°C	12	100	
Q _C	Total Charge	VR=400V IF=2A TJ=25°C	4.8		nC
C	Total Capacitive	VR=0V TJ=25°C f=1MHz	95		pF
		VR=200V TJ=25°C f=1MHz	10		
		VR=400V TJ=25°C f=1MHz	9		
E _C	Capacitance Stored Energy	VR=400V	1.4		uJ

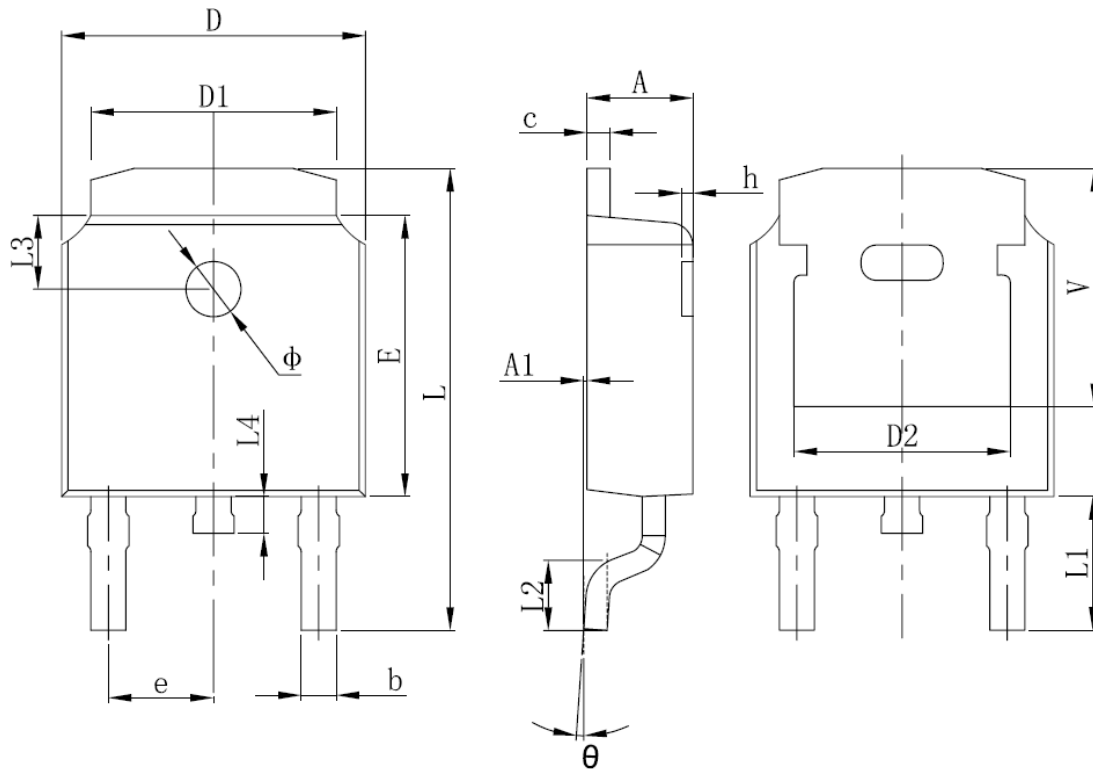


➤ **Typical Characteristics**(TA=25°C unless otherwise noted)





➤ Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.635	0.770	0.025	0.030
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.712	10.312	0.382	0.406
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
phi	1.100	1.300	0.043	0.051
theta	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.250 REF.		0.207 REF.	



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