

DESC0865W

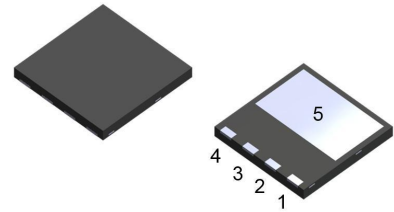
8.0AMPS.SIC SCHOTTKY BARRIER DIODE

FEATURE

- . 650V Schottky Diode
- . Zero Reverse Recovery/Zero Forward Recovery
- . High Efficiency Operation
- . Extremely Fast Switching
- . Temperature Independent Switching Behavior

TYPICAL APPLICATIONS

- . Switch mode power supply
- . Power factor correction Solar Invertor
- . Solar inverter
- . Uninterruptible power supply



DFN8*8


MAXIMUM RATINGS ($T_C=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	DESC0865W	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	650	V
Maximum RMS Voltage	V_{RMS}	455	V
Maximum DC blocking Voltage	V_{DC}	650	V
Maximum Average Forward Rectified Current at $T_C = 150^\circ\text{C}$	$I_{F(AV)}$	8	A
Non-Repetitive Peak Forward Surge Current $T_c=25^\circ\text{C}, t_p=8.3 \text{ ms}$, Half Sine Pulse	I_{FSM}	68	A
Total power dissipation $T_c=25^\circ\text{C}$	P_D	45.4	W
Operation Junction Temperature and Storage Temperature	T_J, T_{STG}	-55 to +175	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_C=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Typ	Max	Units	
Forward voltage	V_F	$I_F=8\text{A}, T_j=25^\circ\text{C}$	1.27	1.5	V
		$I_F=8\text{A}, T_j=175^\circ\text{C}$	1.38	1.6	
Reverse current	I_R	$V_R=650\text{V}, T_j=25^\circ\text{C}$	5	50	μA
		$V_R=650\text{V}, T_j=175^\circ\text{C}$	25	200	
Total capacitive charge	Q_c	22	---	nC	
Total capacitance	C	$V_R=0\text{V}, T_j=25^\circ\text{C}, f=1\text{MHZ}$	510	---	pF
		$V_R=200\text{V}, T_j=25^\circ\text{C}, f=1\text{MHZ}$	52	---	
		$V_R=400\text{V}, T_j=25^\circ\text{C}, f=1\text{MHZ}$	38	---	

THERMAL CHARACTERISTICS ($T_C=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Typ	Max	Units
Typical Thermal Resistance Junction to Case	$R_{(JC)}$	3.3	----	$^\circ\text{C}/\text{W}$

RATING AND CHARACTERISTIC CURVES

FIG.1-FORWARD CHARACTERISTICS

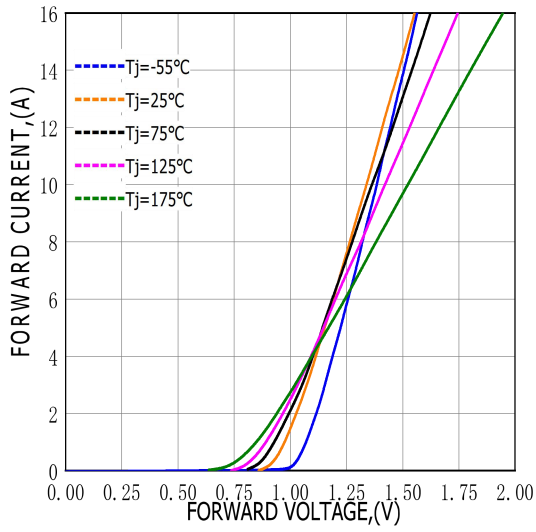


FIG.2-REVERSE CHARACTERISTICS

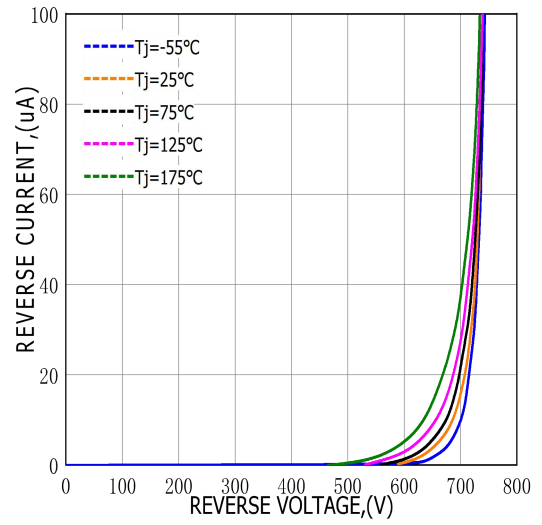


FIG.3-TOTAL CAPACITANCE CHARGE VS REVERSE VOLTAGE

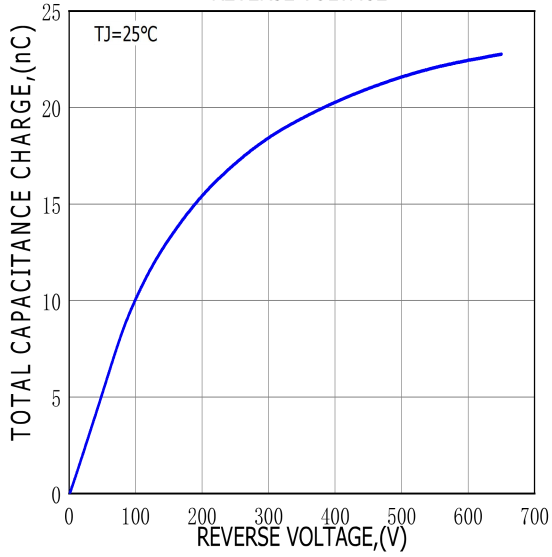
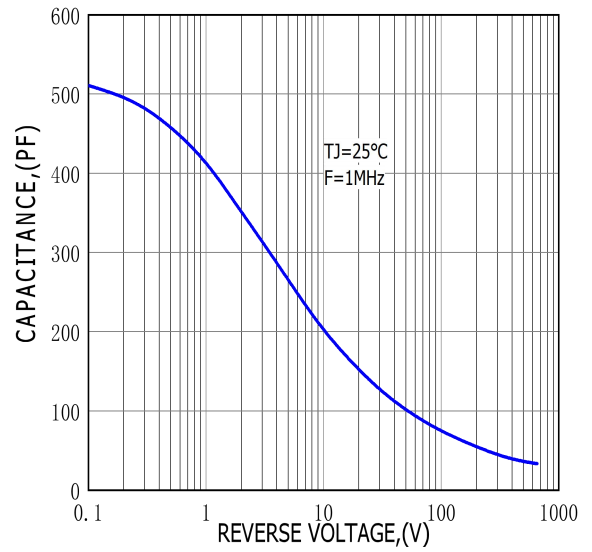
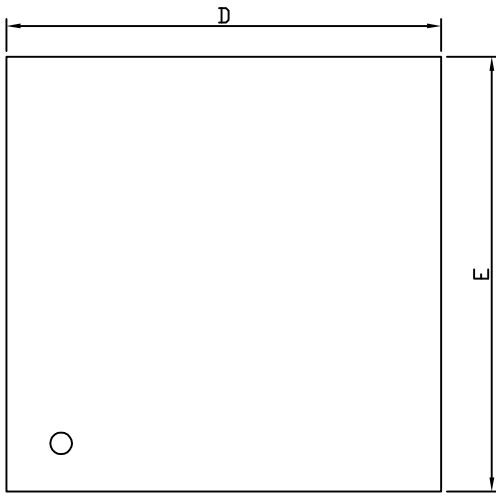


FIG.4-CAPACITANCE VS REVERSE VOLTAGE



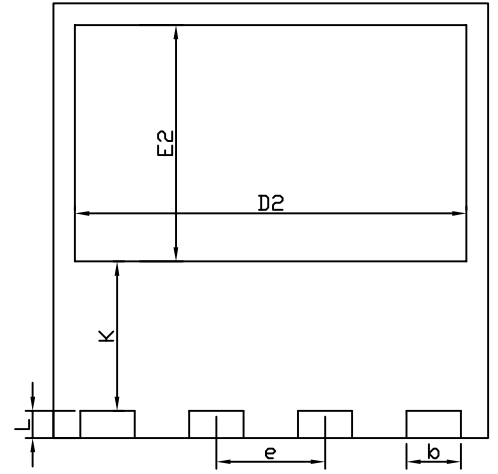
DFN8x8 PACKAGE OUTLINE



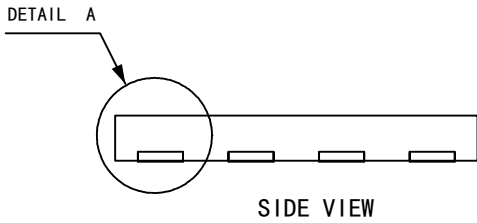
TOP VIEW



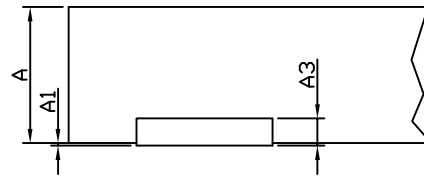
SIDE VIEW



BOTTOM VIEW

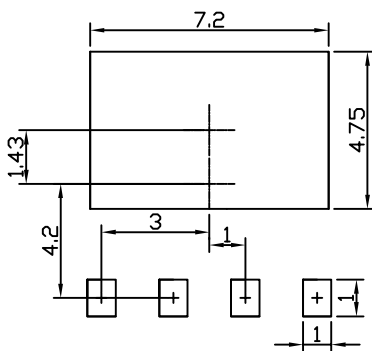


SIDE VIEW



DETAIL A

RECOMMENDED LAND PATTERN



UNIT: mm

	MIN	NOM	MAX
A	0.90	1.00	1.10
A1	0.00	0.02	0.05
A3		0.20	
b	0.90	1.00	1.10
D	7.90	8.00	8.10
E	7.90	8.00	8.10
D2	7.10	7.20	7.30
E2	4.25	4.35	4.45
e	1.90	2.00	2.10
K	2.65	2.75	2.85
L	0.40	0.50	0.60