

DESC0465W

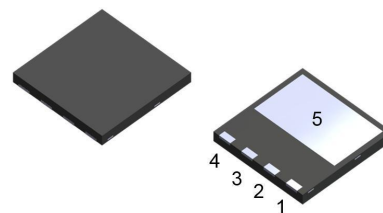
4.0AMPS.SIC SCHOTTKY BARRIER DIODE

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°C unless otherwise noted)

Parameter	Symbol	DESC0465W	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°C	$I_{F(AV)}$	4	A
Non-Repetitive Peak Forward Surge Current T _c =25°C, t _p =8.3 ms, Half Sine Pulse	I_{FSM}	32	A
Total power dissipation T _c =25°C	P_D	36.5	W
Operation Junction Temperature and Storage Temperature	T_J, T_{STG}	-40 to +175	°C

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

Parameter	Symbol	Typ	Max	Units	
Forward voltage	V_F	I _F =4A, T _j =25°C	1.27	1.5	V
		I _F =4A, T _j =175°C	1.38	1.6	
Reverse current	I_R	V _R =650V, T _j =25°C	4	50	μA
		V _R =650V, T _j =175°C	20	200	
Total capacitive charge	Q_c	11.5	---	nC	
Total capacitance	C	V _R =0.1V, T _j =25°C, f=1MHZ	250	---	pF
		V _R =200V, T _j =25°C, f=1MHZ	26	---	
		V _R =400V, T _j =25°C, f=1MHZ	19	---	

THERMAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

Parameter	Symbol	Typ	Max	Units
Typical Thermal Resistance Junction to Case	$R_{(JC)}$	4.1	----	°C/W

RATING AND CHARACTERISTIC CURVES

FIG.1-FORWARD CHARACTERISTICS

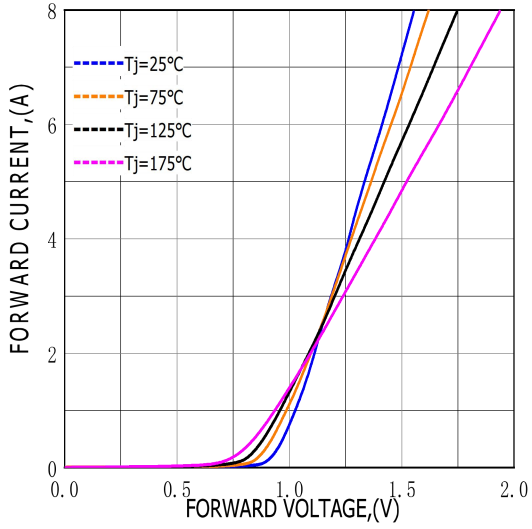


FIG.2-REVERSE CHARACTERISTICS

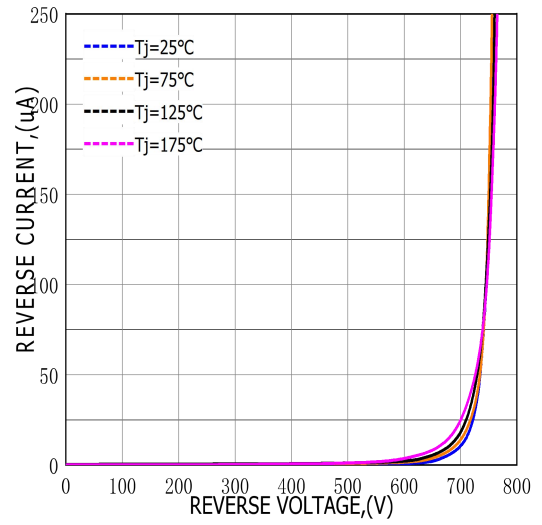


FIG.3-TOTAL CAPACITANCE CHARGE VS REVERSE VOLTAGE

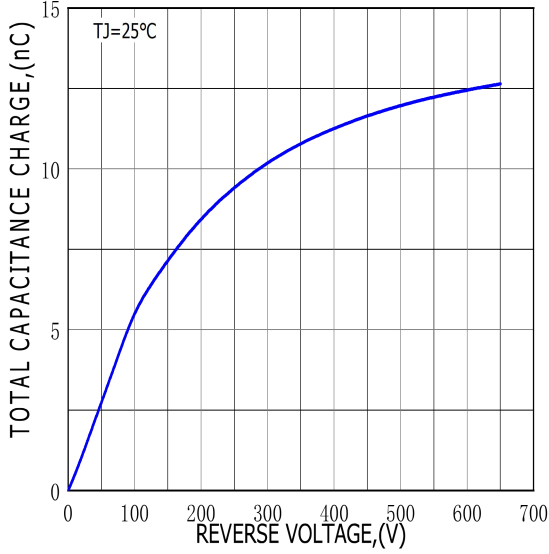
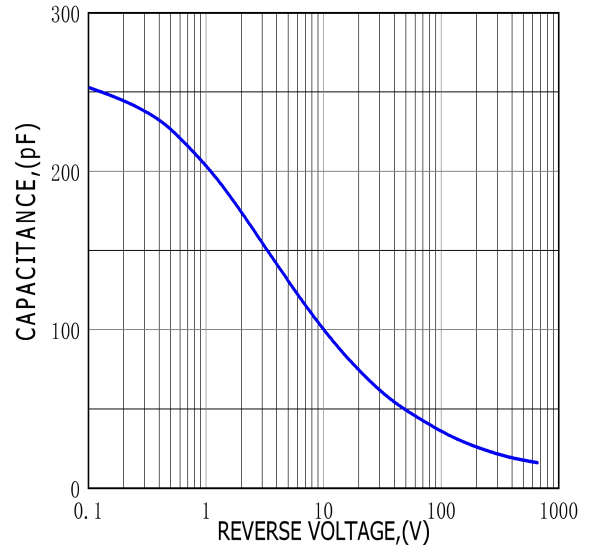
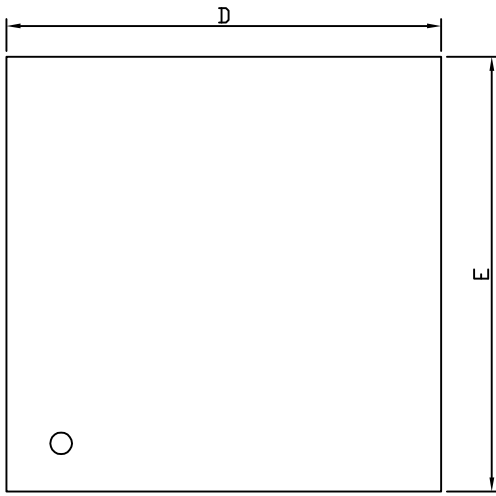


FIG.4-CAPACITANCE VS REVERSE VOLTAGE



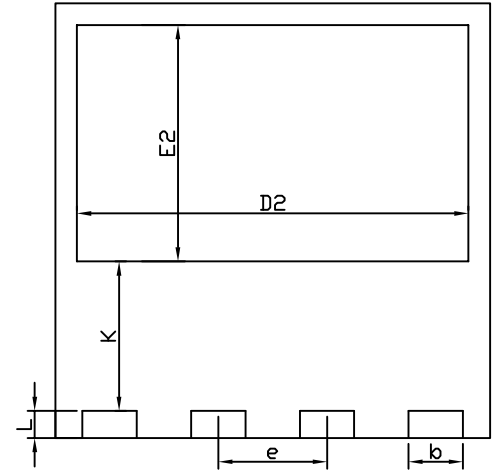
DFN8x8 PACKAGE OUTLINE



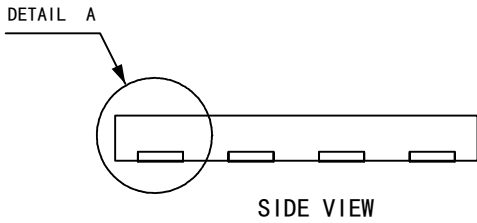
TOP VIEW



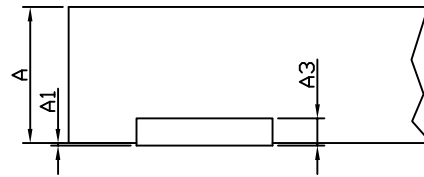
SIDE VIEW



BOTTOM VIEW

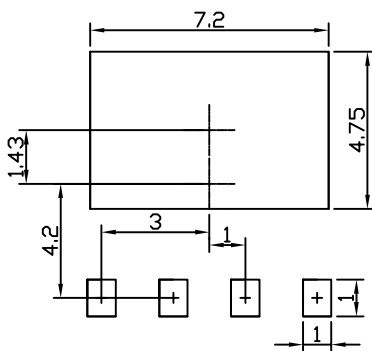


SIDE VIEW



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