

DESC1065E

10.0AMPS.SIC SCHOTTKY BARRIER DIODE

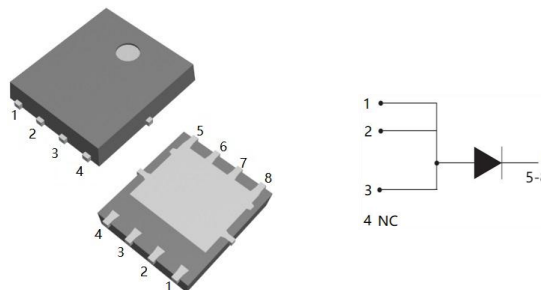
FEATURE

- . 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

DFN5*6



MAXIMUM RATINGS (T_C=25°C unless otherwise noted)

Parameter	Symbol	DESC1065E	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	$I_{F(AV)}$	10	A
Non-Repetitive Peak Forward Surge Current T _C =25°C, t _p =8.3 ms, Half Sine Pulse	I_{FSM}	86	A
Total power dissipation T _C =25°C	P_D	62.5	W
Operation Junction Temperature and Storage Temperature	T_J, T_{STG}	-55 to +175	°C

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

Parameter	Symbol	Typ	Max	Units
Forward voltage	$I_F=10A, T_J=25^\circ C$	1.27	1.5	V
	$I_F=10A, T_J=175^\circ C$	1.38	1.6	
Reverse current	$V_R=650V, T_J=25^\circ C$	6	50	μA
	$V_R=650V, T_J=175^\circ C$	25	200	
Total capacitive charge	$V_R=400V, I_F=10A$ $di/dt = 200A/\mu s, T_J = 25^\circ C$	Q_c 25	---	nC
Total capacitance	$V_R=0V, T_J=25^\circ C, f=1MHZ$	640	---	pF
	$V_R=200V, T_J=25^\circ C, f=1MHZ$	66	---	
	$V_R=400V, T_J=25^\circ C, f=1MHZ$	48	---	

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

Parameter	Symbol	Typ	Max	Units
Typical Thermal Resistance Junction to Case	$R_{(JC)}$	2.4	----	°C/W

RATING AND CHARACTERISTIC CURVES

FIG.1-FORWARD CHARACTERISTICS

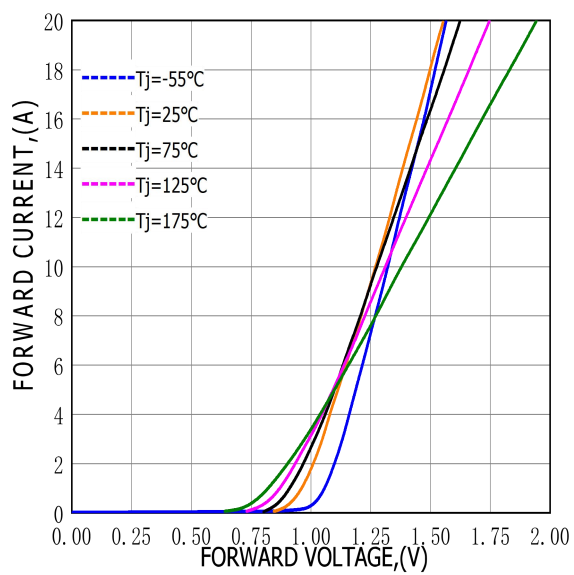


FIG.2-REVERSE CHARACTERISTICS

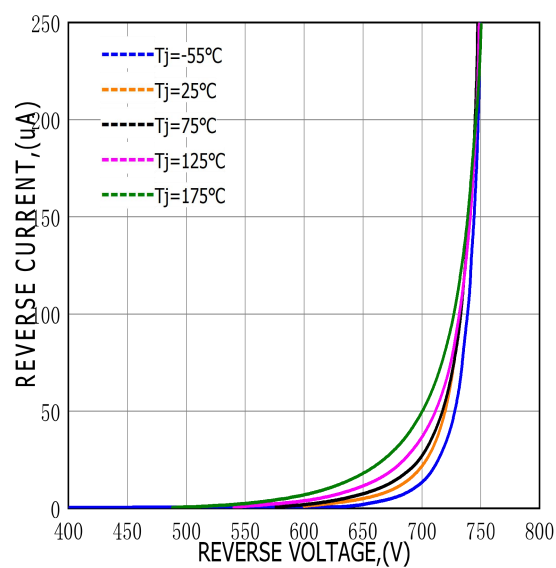


FIG.3-TOTAL CAPACITANCE CHARGE VS REVERSE VOLTAGE

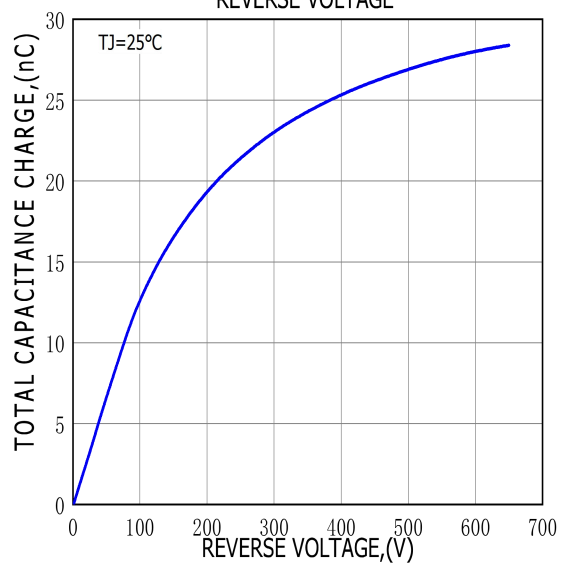
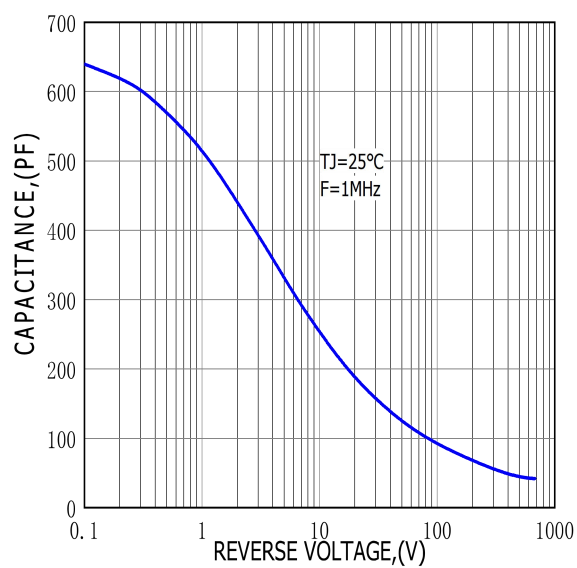
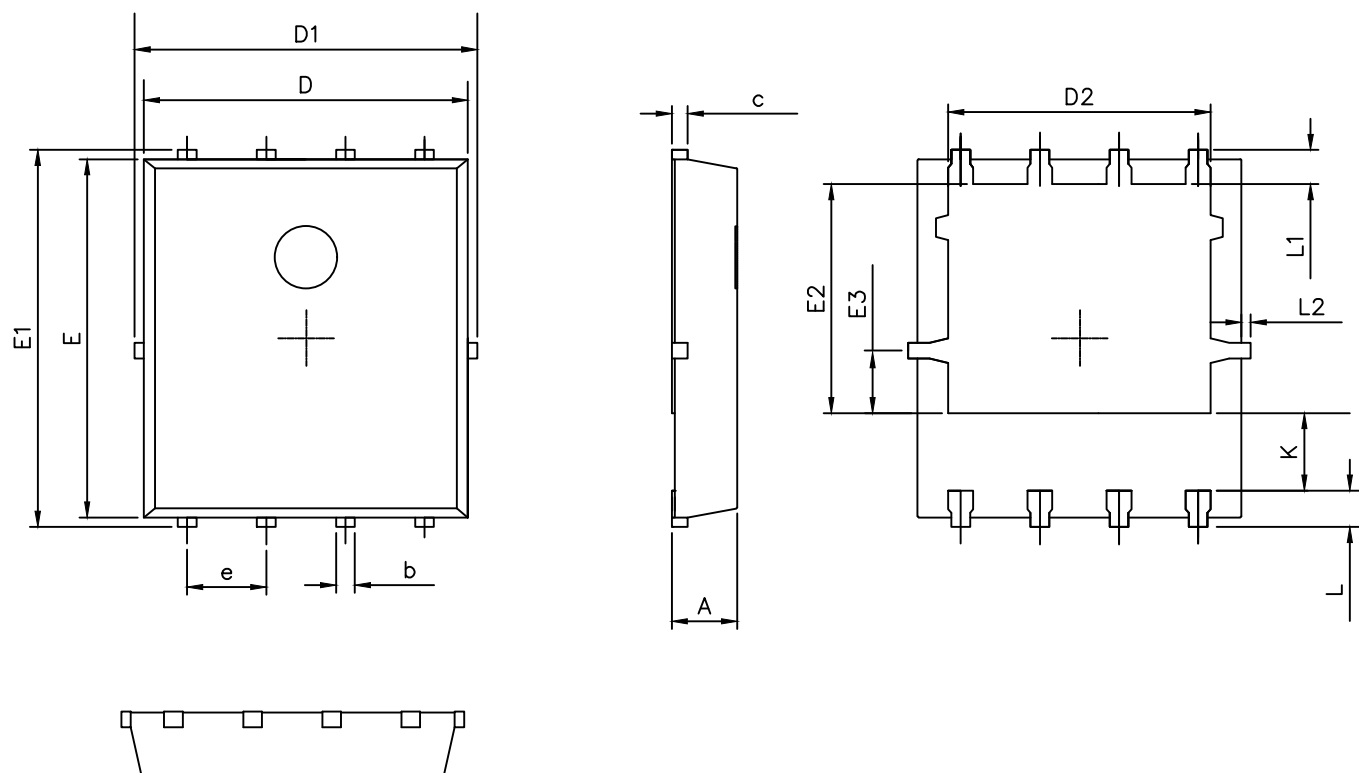


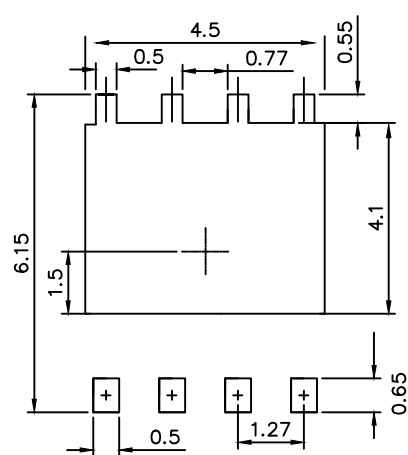
FIG.4-CAPACITANCE VS REVERSE VOLTAGE



DFN5x6 PACKAGE OUTLINE



RECOMMENDED LAND PATTERN



UNIT: mm

	MIN	NOM	MAX
A	0.90	1.00	1.10
b	0.25	0.35	0.50
c	0.10	0.20	0.30
D	4.80	5.00	5.30
D1	4.90	5.10	5.50
D2	3.92	4.02	4.20
E	5.65	5.75	5.85
E1	5.90	6.05	6.20
E2	3.325	3.525	3.775
E3	0.80	0.90	1.00
e		1.27	
L	0.40	0.55	0.70
L1		0.65	
L2	0.00		0.15
K	1.00	1.30	1.50