

## PESC0465G

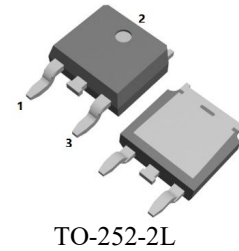
### 4.0AMPS.SIC SCHOTTKY BARRIER DIODE

**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


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

Parameter	Symbol	PESC0465G	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 $T_C = 150^\circ\text{C}$	$I_{F(AV)}$	4	A
Non-Repetitive Peak Forward Surge Current $T_c=25^\circ\text{C}, t_p=8.3 \text{ ms}$ , Half Sine Pulse	$I_{FSM}$	32	A
Total power dissipation $T_c=25^\circ\text{C}$	$P_D$	53.2	W
Operation Junction Temperature and Storage Temperature	$T_J, T_{STG}$	-40 to +175	$^\circ\text{C}$

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

Parameter	Symbol	Typ	Max	Units	
Forward voltage	$V_F$	$I_F=4\text{A}, T_j=25^\circ\text{C}$	1.27	1.5	V
		$I_F=4\text{A}, T_j=175^\circ\text{C}$	1.38	1.6	
Reverse current	$I_R$	$V_R=650\text{V}, T_j=25^\circ\text{C}$	4	50	$\mu\text{A}$
		$V_R=650\text{V}, T_j=175^\circ\text{C}$	20	200	
Total capacitive charge	$Q_c$	11.5	---	nC	
Total capacitance	$C$	$V_R=0.1\text{V}, T_j=25^\circ\text{C}, f=1\text{MHZ}$	250	---	pF
		$V_R=200\text{V}, T_j=25^\circ\text{C}, f=1\text{MHZ}$	26	---	
		$V_R=400\text{V}, T_j=25^\circ\text{C}, f=1\text{MHZ}$	19	---	

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

Parameter	Symbol	Typ	Max	Units
Typical Thermal Resistance Junction to Case	$R_{(JC)}$	2.82	----	$^\circ\text{C}/\text{W}$

**RATING AND CHARACTERISTIC CURVES**

FIG.1-FORWARD CHARACTERISTICS

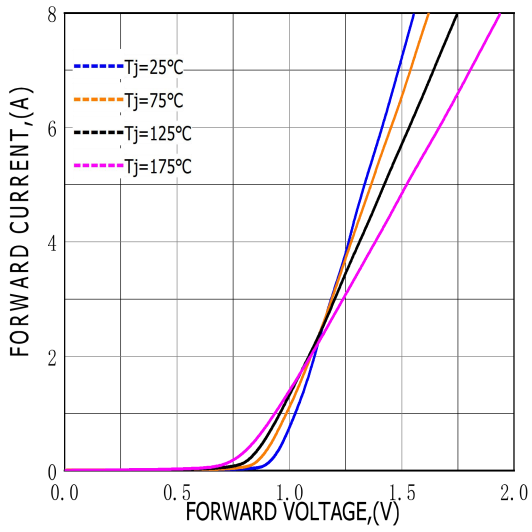


FIG.2-REVERSE CHARACTERISTICS

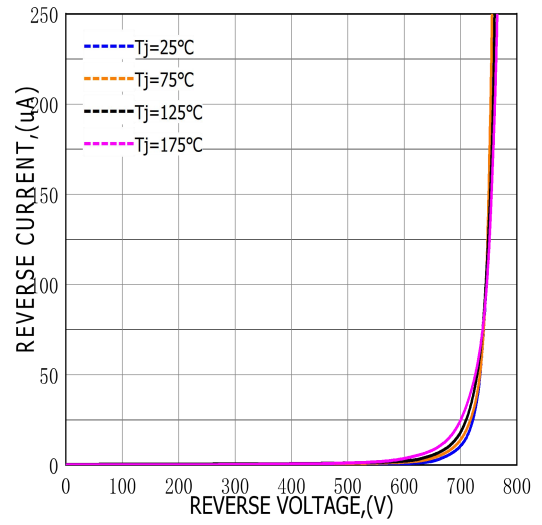


FIG.3-TOTAL CAPACITANCE CHARGE VS REVERSE VOLTAGE

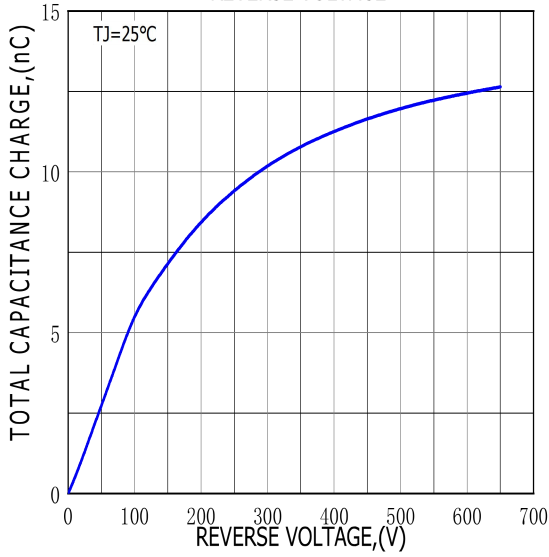
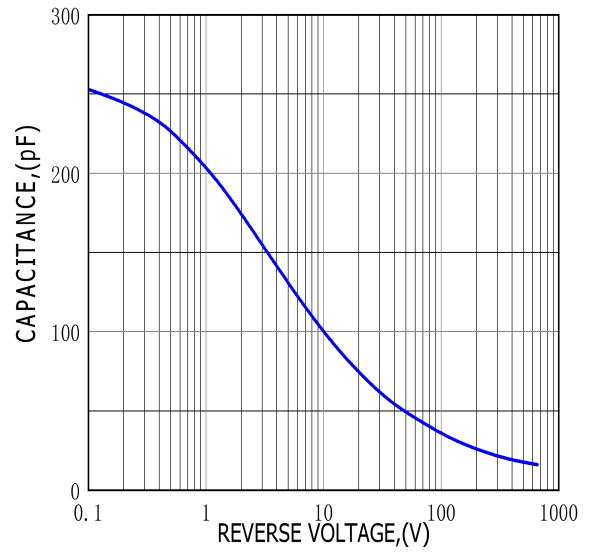
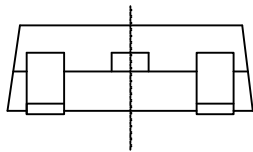
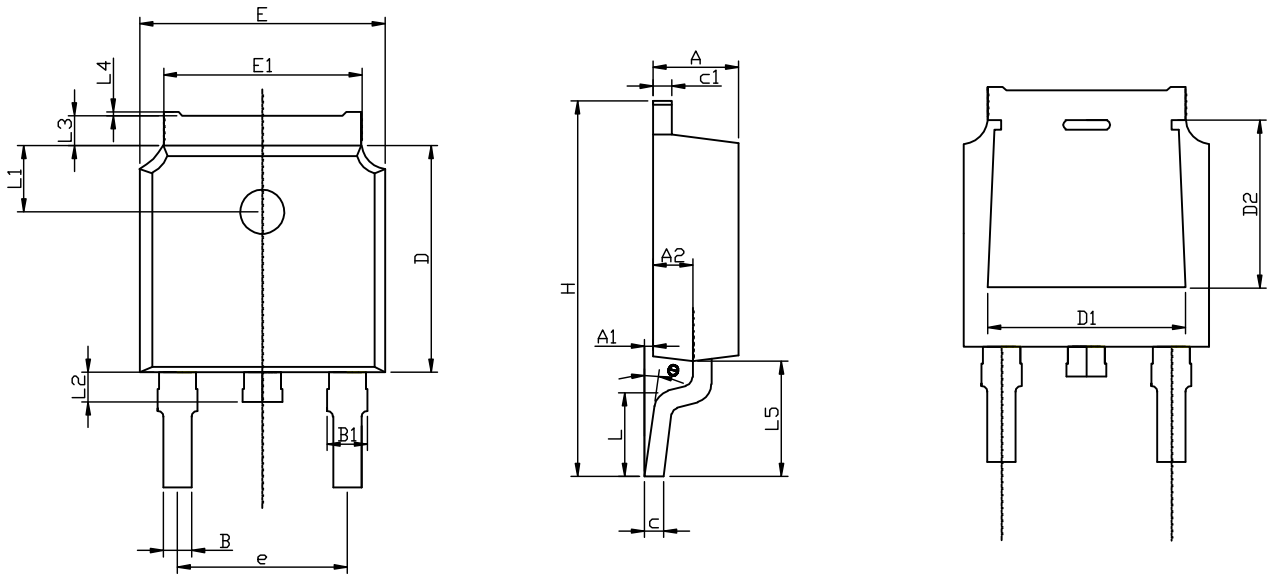


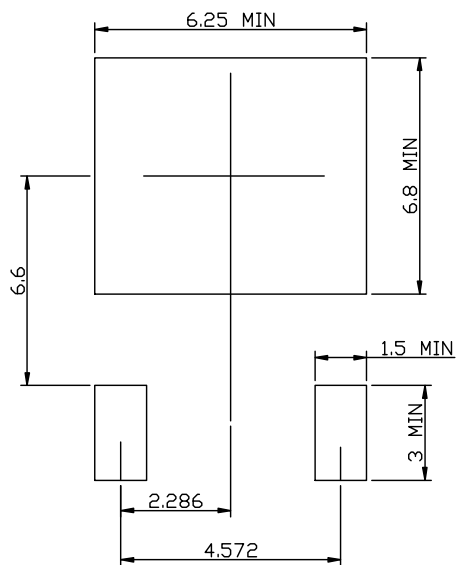
FIG.4-CAPACITANCE VS REVERSE VOLTAGE



# TO-252-2L PACKAGE OUTLINE



## RECOMMENDED LAND PATTERN



	MIN	NOM	MAX
A	2.15	2.30	2.45
A1	0.05	0.10	0.20
A2	0.91	1.07	1.22
B	0.66	0.76	0.86
B1	0.93	1.08	1.23
C	0.40	0.50	0.60
C1	0.40	0.50	0.60
D	5.95	6.10	6.25
D1	-	4.8REF	-
D2	-	3.8REF	-
E	6.45	6.60	6.75
E1	5.12	5.32	5.52
L		1.65	
L1	1.58	1.78	1.98
L2	0.60	0.80	1.00
L3	0.70	0.85	1.00
L4	0.00	0.05	0.20
L5	2.80	3.10	3.40
H	9.80	10.10	10.40
Θ	0°		8°
e		4.572REF	

UNIT: mm