

## PESC1065B

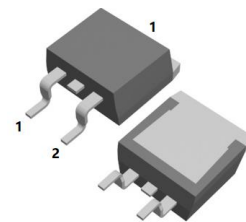
### 10.0AMPS.SIC SCHOTTKY BARRIER DIODE

**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



TO-263-2L


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

Parameter	Symbol	PESC1065B	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 $T_C = 150^\circ\text{C}$	$I_{F(AV)}$	10	A
Non-Repetitive Peak Forward Surge Current $T_c=25^\circ\text{C}, t_p=8.3 \text{ ms}, \text{ Half Sine Pulse}$	$I_{FSM}$	86	A
Total power dissipation $T_c=25^\circ\text{C}$	$P_D$	136	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	$V_F$	$I_F=10\text{A}, T_j=25^\circ\text{C}$	1.27	1.5	V
		$I_F=10\text{A}, T_j=175^\circ\text{C}$	1.38	1.6	
Reverse current	$I_R$	$V_R=650\text{V}, T_j=25^\circ\text{C}$	6	50	$\mu\text{A}$
		$V_R=650\text{V}, T_j=175^\circ\text{C}$	25	200	
Total capacitive charge	$Q_c$	25	---	nC	
Total capacitance	$C$	$V_R=0\text{V}, T_j=25^\circ\text{C}, f=1\text{MHZ}$	640	---	pF
		$V_R=200\text{V}, T_j=25^\circ\text{C}, f=1\text{MHZ}$	66	---	
		$V_R=400\text{V}, T_j=25^\circ\text{C}, f=1\text{MHZ}$	48	---	

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

Parameter	Symbol	Typ	Max	Units
Typical Thermal Resistance Junction to Case	$R_{(JC)}$	1.1	----	$^\circ\text{C}/\text{W}$

RATING AND CHARACTERISTIC CURVES

FIG.1-FORWARD CHARACTERISTICS

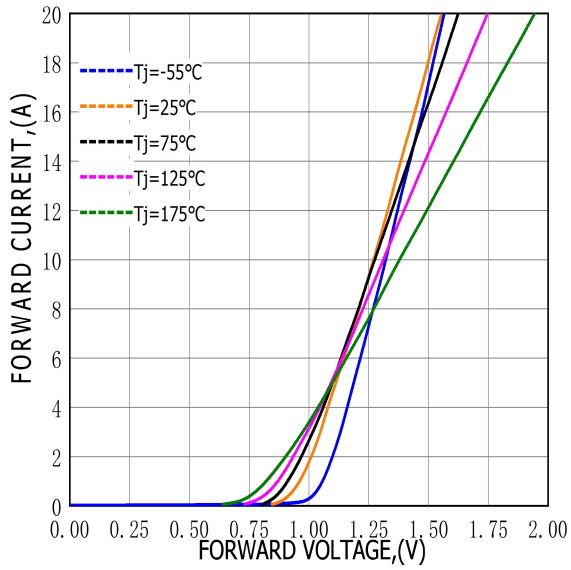


FIG.2-REVERSE CHARACTERISTICS

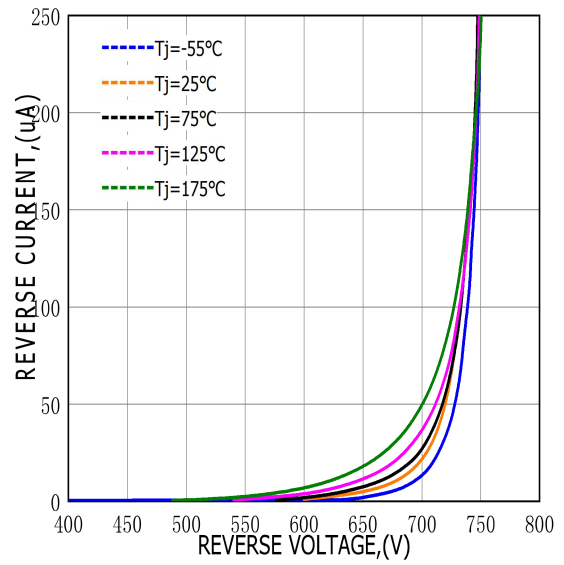


FIG.3-TOTAL CAPACITANCE CHARGE VS REVERSE VOLTAGE

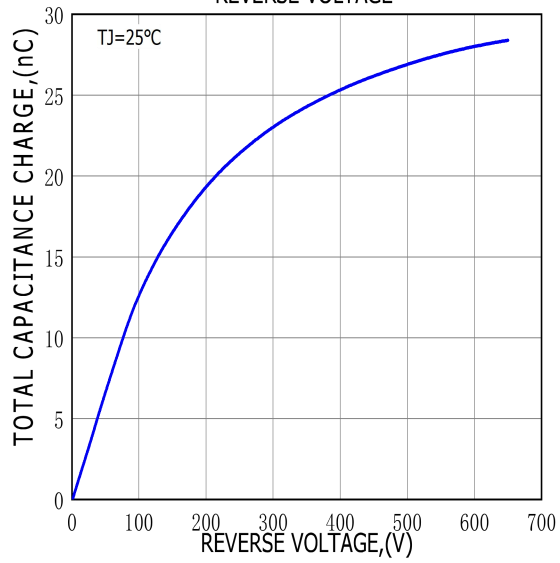
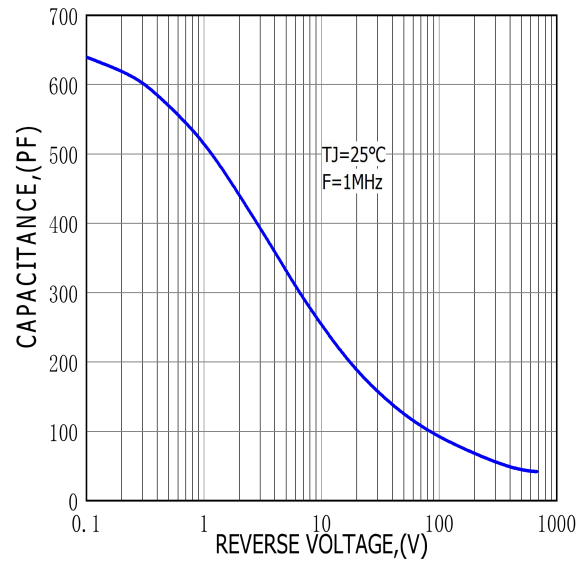
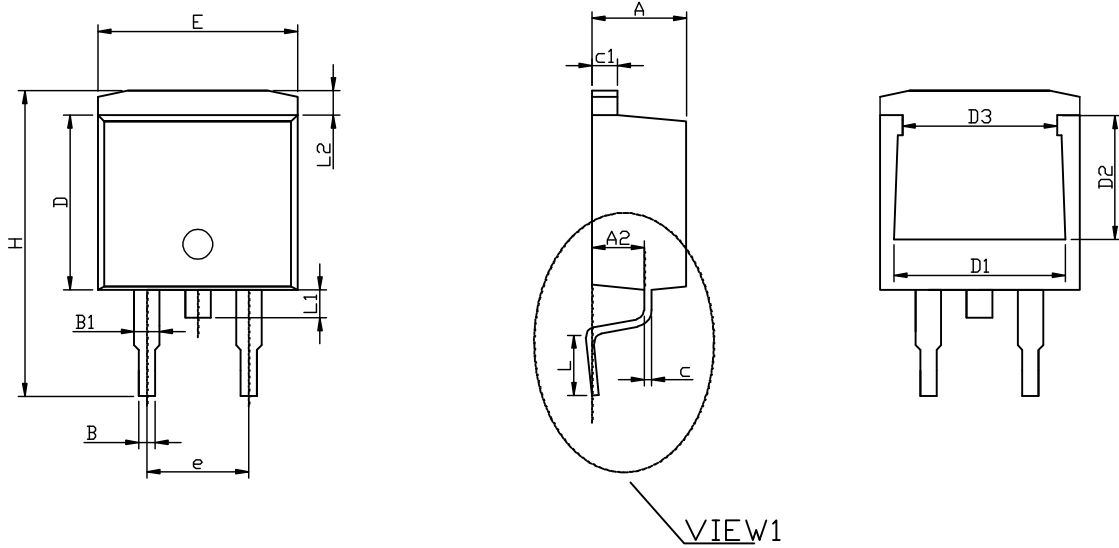


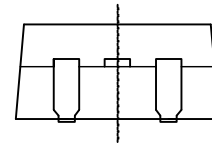
FIG.4-CAPACITANCE VS REVERSE VOLTAGE



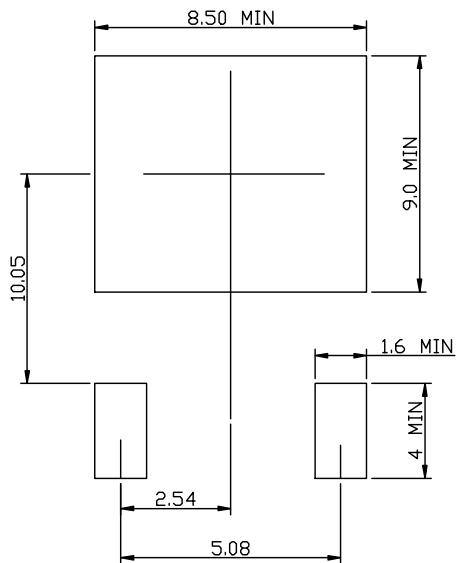
# TO-263-2L PACKAGE OUTLINE



VIEW1



## RECOMMENDED LAND PATTERN



	MIN	NOM	MAX
A	4.50	4.70	4.90
A1	0.05	0.15	0.30
A2	2.45	2.60	2.70
B	0.72	0.82	0.92
B1	1.12	1.27	1.42
c	0.28	0.38	0.48
c1	1.17	1.27	1.37
D	8.46	8.66	8.86
D1	7.90	8.10	8.40
D2	5.50	5.70	5.90
D3	7.10	7.30	7.50
E	9.85	10.15	10.45
e		5.08BCS	
H	14.75	15.15	15.55
L	2.30	2.55	2.80
L1	1.20	1.40	1.60
L2	1.01	1.23	1.50
θ	0°	7°	8°

UNIT: mm