

## PESC0865B

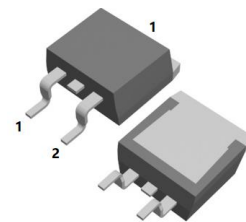
### 8.0AMPS.SIC SCHOTTKY BARRIER DIODE

#### FEATURE

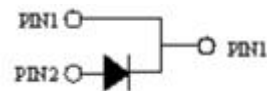
- . 650V Schottky Diode
- . Zero Reverse Recovery/Zero Forward Recovery
- . High Efficiency Operation
- . Extremely Fast Switching
- . Temperature Independent Switching Behavior

#### TYPICAL APPLICATIONS

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



TO-263-2L



#### MAXIMUM RATINGS (T<sub>C</sub>=25°C unless otherwise noted)

Parameter	Symbol	PESC0865B	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 <sub>C</sub> =150°C	$I_{F(AV)}$	8	A
Non-Repetitive Peak Forward Surge Current T <sub>c</sub> =25°C, t <sub>p</sub> =8.3 ms, Half Sine Pulse	$I_{FSM}$	68	A
Total power dissipation T <sub>c</sub> =25°C	$P_D$	107	W
Operation Junction Temperature and Storage Temperature	$T_J, T_{STG}$	-55 to +175	°C

#### ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C unless otherwise noted)

Parameter	Symbol	Typ	Max	Units	
Forward voltage	$V_F$	I <sub>F</sub> =8A, T <sub>j</sub> =25°C	1.27	1.5	V
		I <sub>F</sub> =8A, T <sub>j</sub> =175°C	1.38	1.6	
Reverse current	$I_R$	V <sub>R</sub> =650V, T <sub>j</sub> =25°C	5	50	μA
		V <sub>R</sub> =650V, T <sub>j</sub> =175°C	25	200	
Total capacitive charge	$Q_c$	22	---	nC	
Total capacitance	$C$	V <sub>R</sub> =0V, T <sub>j</sub> =25°C, f=1MHZ	510	---	pF
		V <sub>R</sub> =200V, T <sub>j</sub> =25°C, f=1MHZ	52	---	
		V <sub>R</sub> =400V, T <sub>j</sub> =25°C, f=1MHZ	38	---	

#### THERMAL CHARACTERISTICS(T<sub>C</sub>=25°C unless otherwise noted)

Parameter	Symbol	Typ	Max	Units
Typical Thermal Resistance Junction to Case	$R_{(JC)}$	1.4	----	°C/W

RATING AND CHARACTERISTIC CURVES

FIG.1-FORWARD CHARACTERISTICS

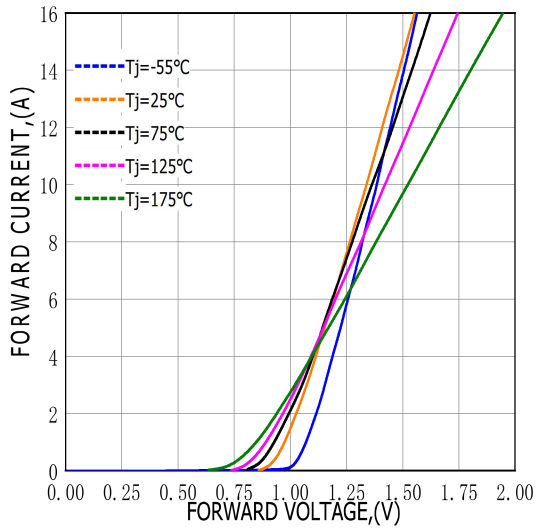


FIG.2-REVERSE CHARACTERISTICS

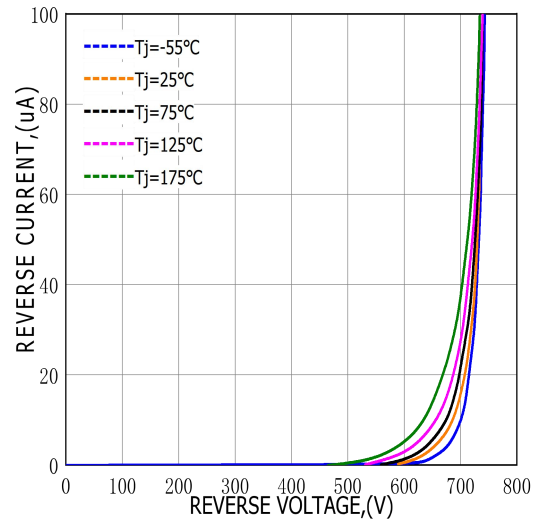


FIG.3-TOTAL CAPACITANCE CHARGE VS REVERSE VOLTAGE

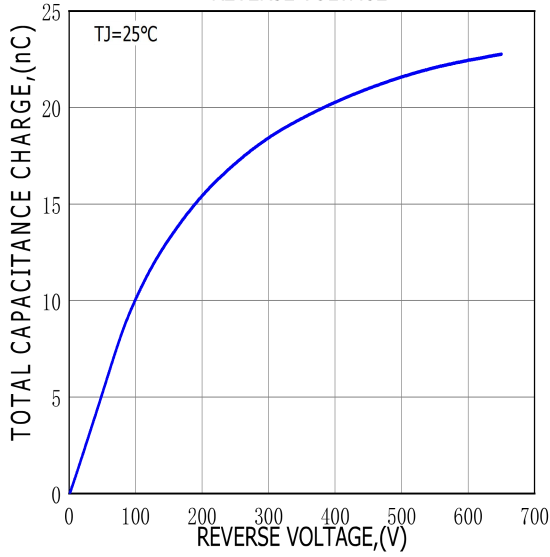
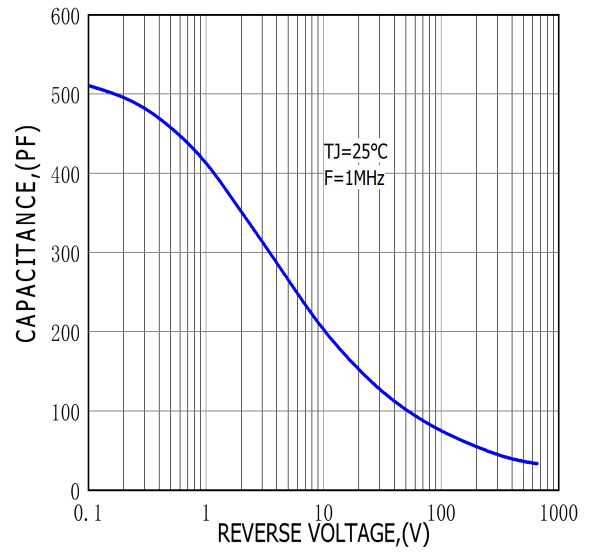
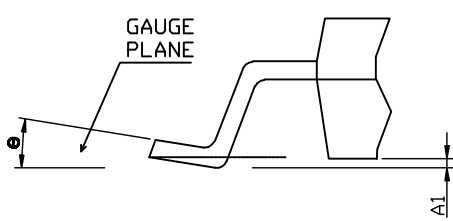
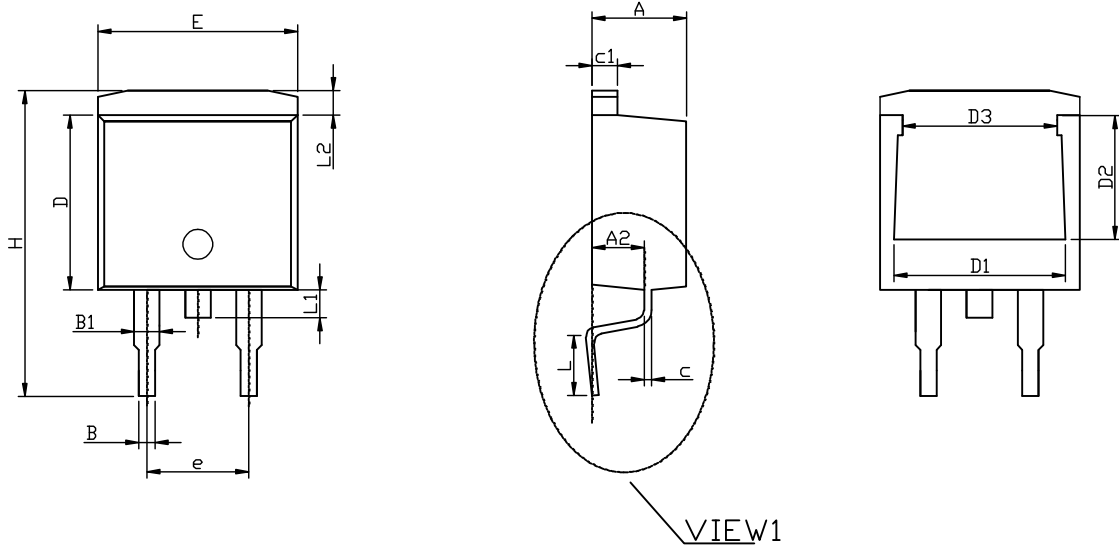


FIG.4-CAPACITANCE VS REVERSE VOLTAGE

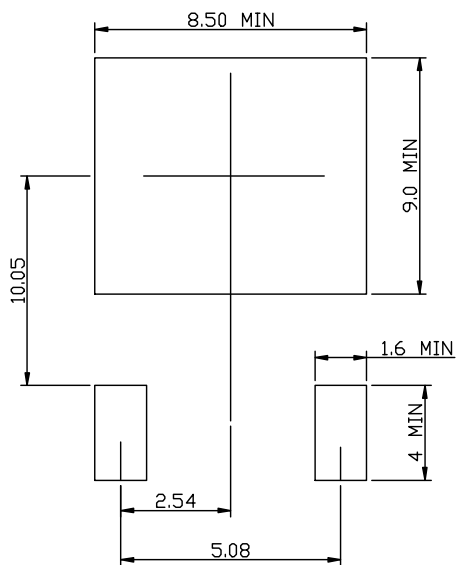


# TO-263-2L PACKAGE OUTLINE



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