

PESC0665MF

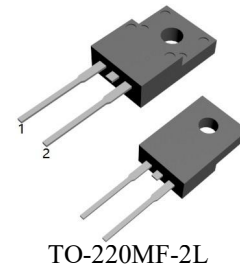
6.0AMPS.SIC SCHOTTKY BARRIER DIODE

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°C unless otherwise noted)

Parameter	Symbol	PESC0665MF	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	$I_{F(AV)}$	6	A
Non-Repetitive Peak Forward Surge Current T _c =25°C, t _p =8.3 ms, Half Sine Pulse	I_{FSM}	52	A
Total power dissipation T _c =25°C	P_D	54.5	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	V_F	I _F =6A, T _j =25°C	1.27	1.5	V
		I _F =6A, 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	17	---	nC	
Total capacitance	C	V _R =0V, T _j =25°C, f=1MHZ	230	---	pF
		V _R =200V, T _j =25°C, f=1MHZ	39	---	
		V _R =400V, T _j =25°C, f=1MHZ	28	---	

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

Parameter	Symbol	Typ	Max	Units
Typical Thermal Resistance Junction to Case	$R_{(JC)}$	2.748	----	°C/W

RATING AND CHARACTERISTIC CURVES

FIG.1-FORWARD CHARACTERISTICS

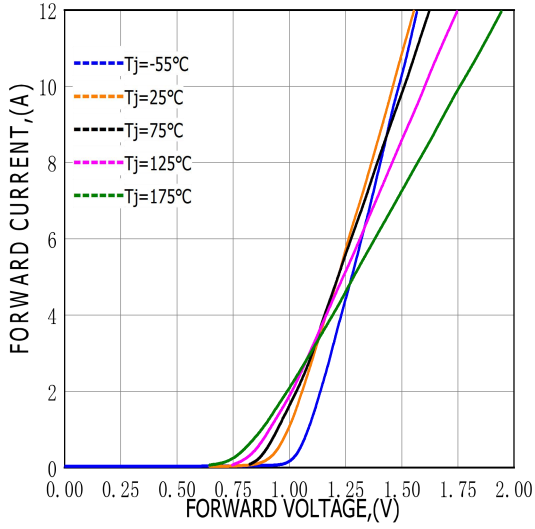


FIG.2-REVERSE CHARACTERISTICS

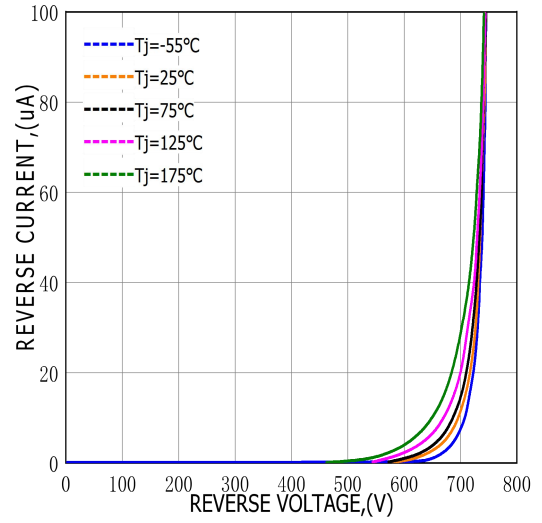


FIG.3-TOTAL CAPACITANCE CHARGE VS REVERSE VOLTAGE

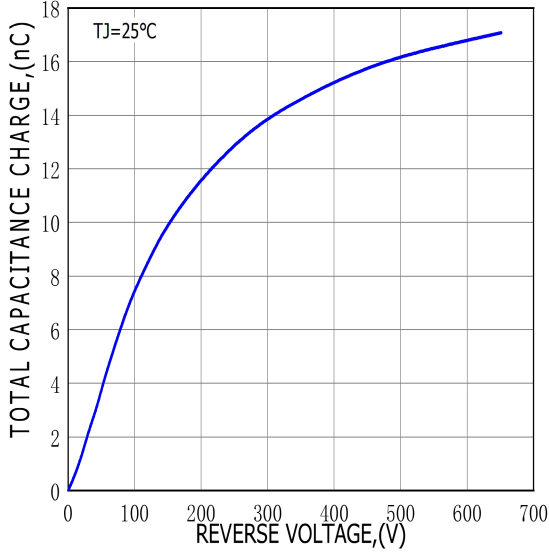
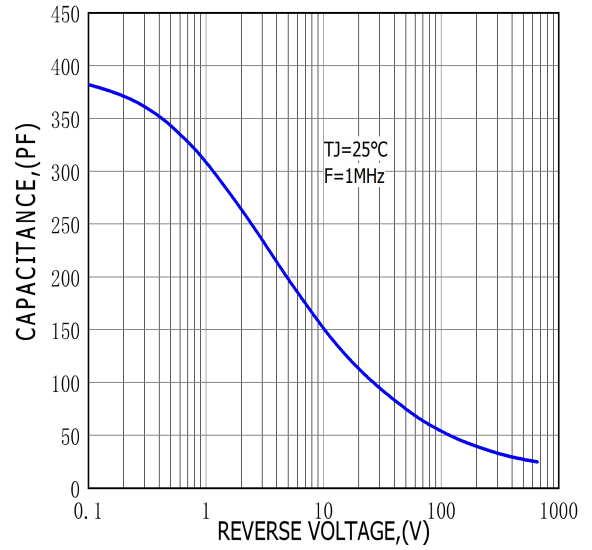
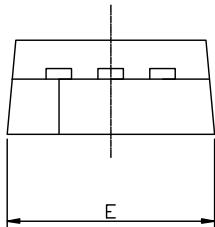
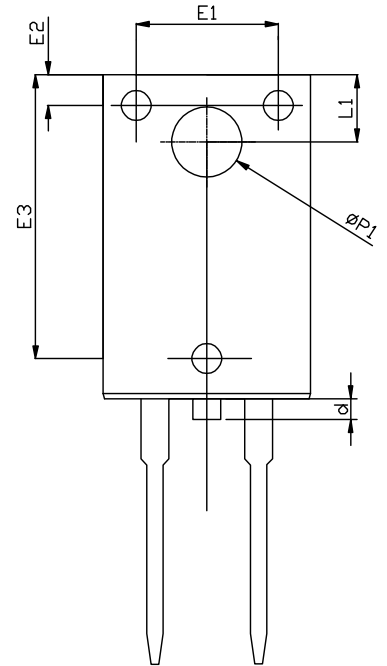
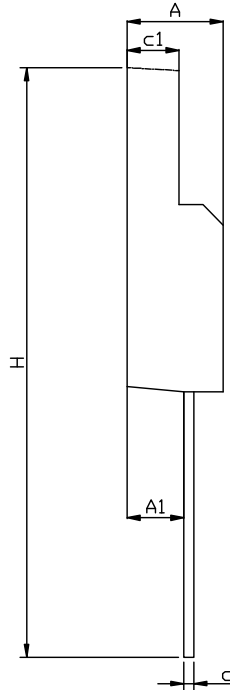
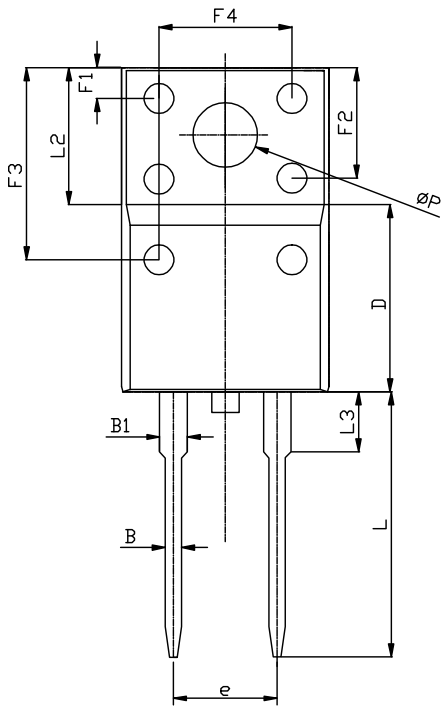


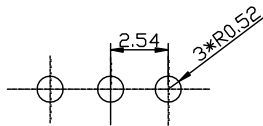
FIG.4-CAPACITANCE VS REVERSE VOLTAGE



TO-220MF-2L PACKAGE OUTLINE



RECOMMENDED LAND PATTERN



UNIT: mm

	MIN	NOM	MAX
A	4.50	4.70	4.90
A1	2.63	2.76	2.89
B	0.75	0.80	0.90
B1	1.15	1.35	1.55
c	0.40	0.50	0.60
c1	2.34	2.54	2.74
d			0.80
D	8.87	9.17	9.47
e	-	5.08REF	-
E	9.86	10.16	10.46
E1	6.86	6.96	7.06
E2	1.40	1.50	1.60
E3	13.80	13.90	14.00
F1	1.40	1.50	1.60
F2	5.15	5.40	5.65
F3	9.10	9.40	9.70
F4	6.70	7.00	7.30
H	28.50	29.00	29.50
L	12.58	12.98	13.38
L1	3.15	3.30	3.45
L2	-	6.70REF	-
L3	2.63	2.93	3.23
ΦP	2.90	3.18	3.48
$\Phi P1$	3.15	3.45	3.75