

/ Descriptions

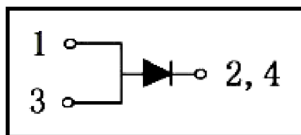
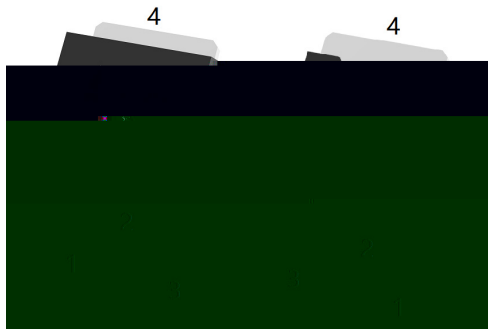
SiC Schottky Barrier Diode in a Plastic Package.

/ Features

Low power loss, high efficiency, HF Product.

/ Applications

For high frequency, high voltage, high current rectifier diode, freewheeling diode.

/ Equivalent Circuit**/ Pinning**

PIN1 3 Anode PIN 2 4 Cathode

/ Marking

See Marking Instructions.

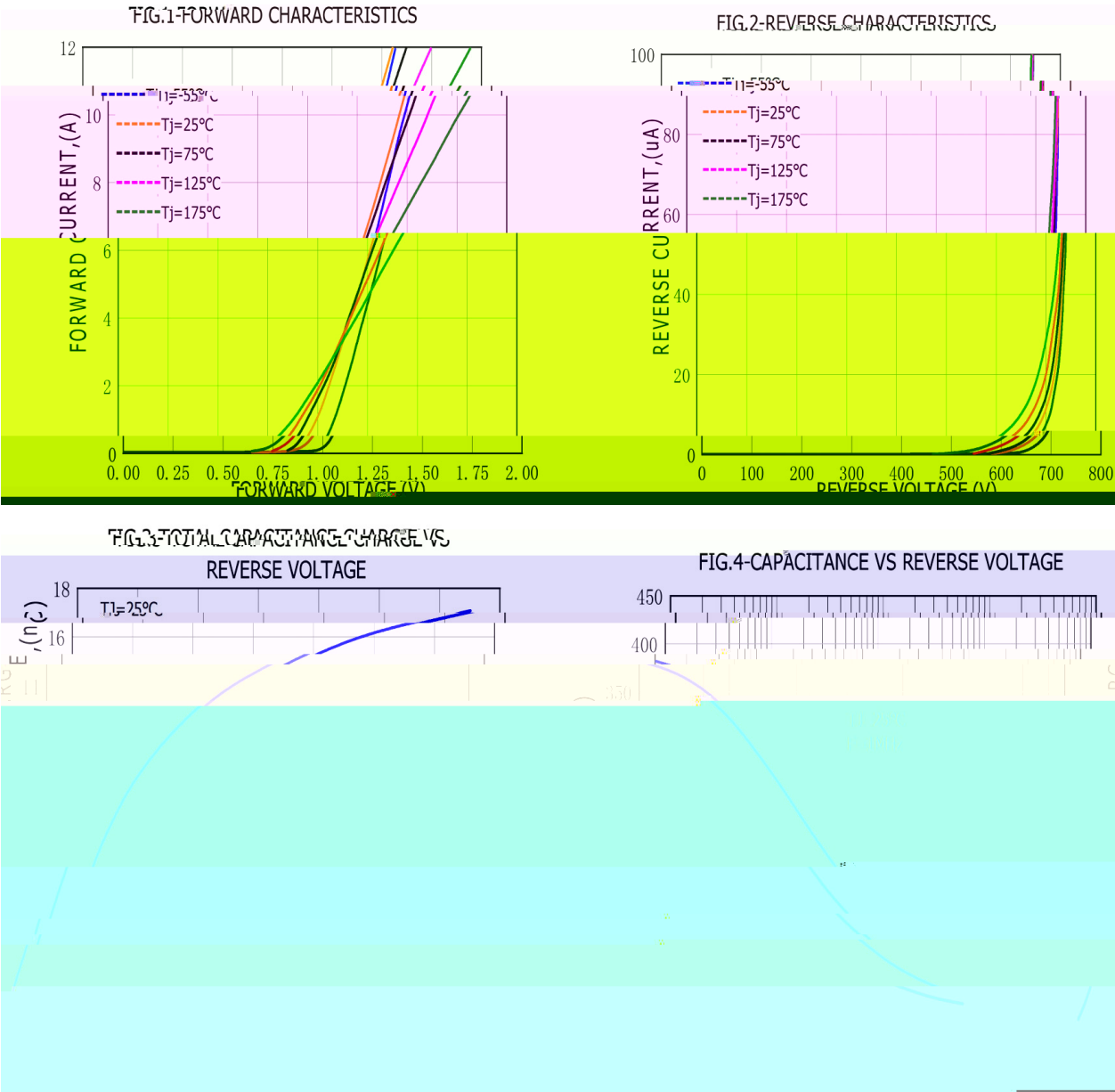
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	650	V
Maximum RMS Voltage	V_{RMS}	455	V
Maximum DC blocking Voltage	V_{DC}	650	V
Continuous Forward Current, $T_C=150^{\circ}\text{C}$	I_F	6	A
Peak forward surge current, $t_p=8.3\text{ms}$	I_{FSM}	52	A
Total power dissipation	P_D	53	W
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	2.8	$^{\circ}\text{C/W}$
Operation Junction Temperature and Storage Temperature	T_J, T_{STG}	-55~+175	$^{\circ}\text{C}$

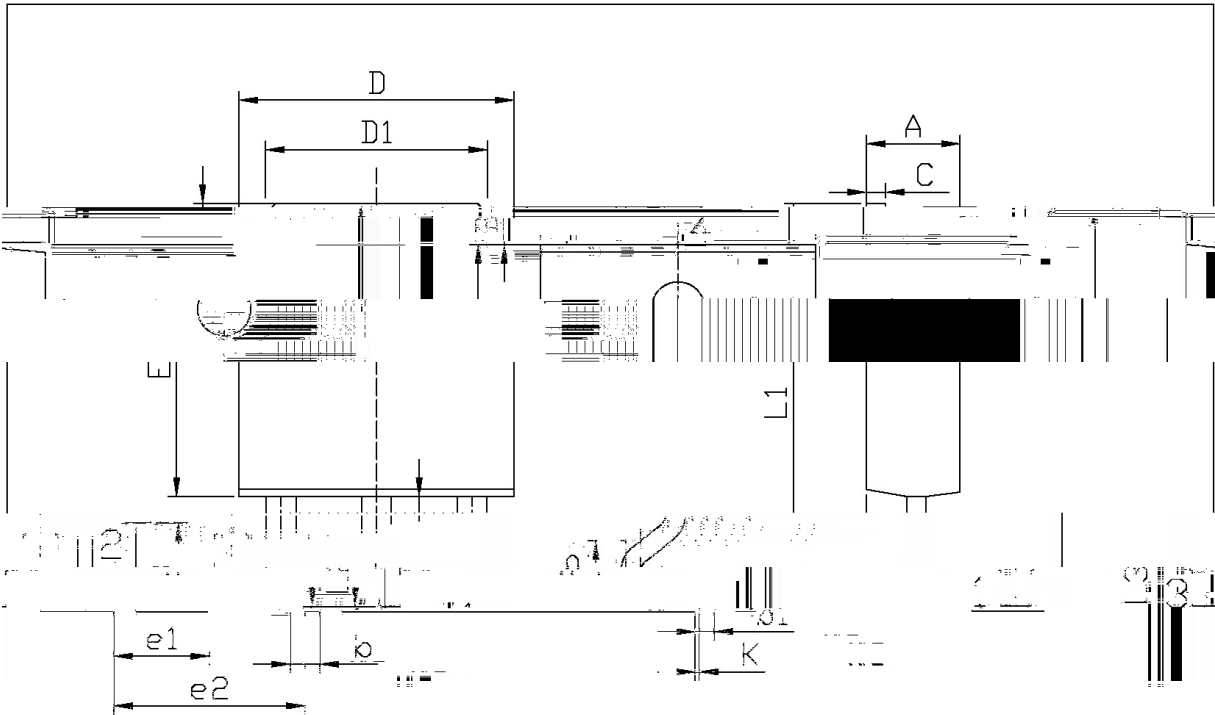
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Voltage	V_R		650	-	-	V
Forward Voltage	V_F	$I_F=6\text{A}$ $T_C=25^{\circ}\text{C}$	-	1.27	1.5	
		$I_F=6\text{A}$ $T_C=175^{\circ}\text{C}$	-	1.38	1.6	
Instantaneous Reverse Current	I_R (Note 1)	$V_R=650\text{V}$ $T_a=25^{\circ}\text{C}$	-	4	50	A
		$V_R=650\text{V}$ $T_a=175^{\circ}\text{C}$	-	200	200	
Total capacitive charge	Q_C	$V_R=650\text{V}, I_F=6\text{A}$ $di/dt=200\text{A}/\mu\text{s}$	-	17	-	nC
Total capacitance	C	$V_R=0\text{V}, T_J=25^{\circ}\text{C}, f=1\text{MHZ}$	-	230	-	pF
		$V_R=200\text{V}, T_J=25, f=1\text{MHZ}$		39	-	
		$V_R=400\text{V}, T_J=25, f=1\text{MHZ}$	-	28	-	
Capacitance Stored Energy	E_C	$V_R=400\text{V}$	-	4.8	-	uJ

/ Electrical Characteristic Curve



/ Package Dimensions



单位：mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	2.20	2.40	E	5.95	6.25
B	0.95	1.25	e1	2.24	2.34
b	0.50	0.90	e2	4.43	4.73
b1	0.45	0.55	L1	9.45	9.95
C	0.45	0.55	L2	1.25	1.75
D	6.45	6.75	L3	0.60	0.90
D1	5.10	5.50	K	0.00	0.10

TO-252

BRSC06650DP

Rev.A Aug.-2024



蓝箭电子
BLUE ROCKET ELECTRONICS

DATA SHEET

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 , Time:60~90sec.
- 2

245 5

5 0.5sec;

2.Peak Temp.:245 5 , Duration:5 0.5sec.
- 3

2 10

/sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260 5

10 1 sec.

Temp.:260±5

Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box