

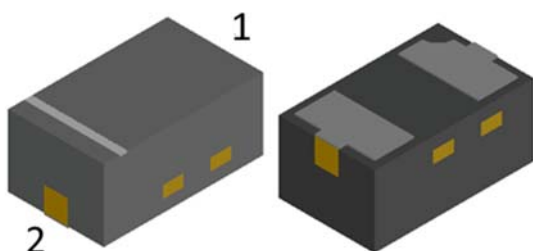
Small Signal Schottky Diode

Features

- Moisture sensitivity level 3
- Reverse voltage: 40V
- Average forward current: 1A

Application

- High frequency and low voltage rectifier



Mechanical data

- **Package:** DFN1006-2L
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Device marking code			R4
Repetitive peak reverse voltage	V_{RRM}	V	40
Forward current	I_F	A	1
Non-repetitive surge peak forward current @ $t=8.3\text{ms}$ half-sine wave	I_{FSM}	A	3
Repetitive Peak Forward Current@ $t_p=1\text{ms}$, $\delta=0.25$	I_{FRM}	A	1.5
Power dissipation	P_D	mW	200
Junction temperature	T_J	$^{\circ}\text{C}$	-55 to +150
Storage temperature	T_{STG}	$^{\circ}\text{C}$	-55 to +150



MBR1040L2

RoHS
COMPLIANT

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Reverse voltage	V _R	V	I _R = 100uA	40		
Forward voltage	V _{F1}	V	I _F =0.1A			0.38
	V _{F2}	V	I _F =0.2A			0.42
	V _{F3}	V	I _F =0.5A			0.49
	V _{F4}	V	I _F =0.7A			0.55
	V _{F5}	V	I _F =1A			0.61
Reverse voltage leakage current	I _{R1}	uA	V _R =10V			30
	I _{R2}	uA	V _R =40V			40

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	625
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°C/W	500

Note:

(1) Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 17mm*10mm copper pad areas



■ Characteristics

Fig 1: P_D - T_a Curve

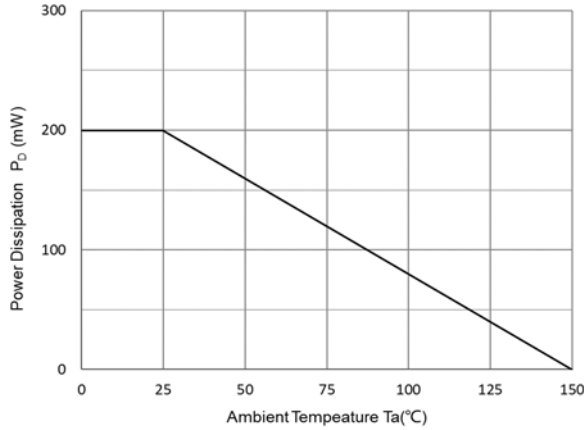


Fig 2: Capacitance Capability

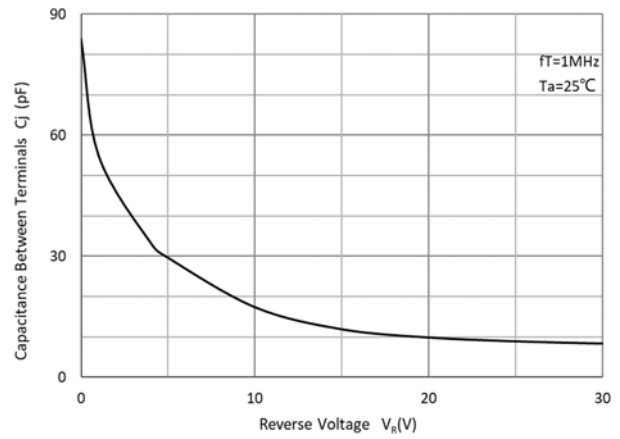


Fig 3: Typical Forward Characteristics

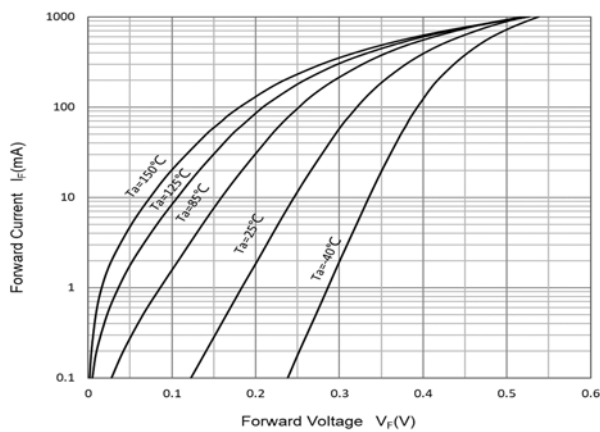
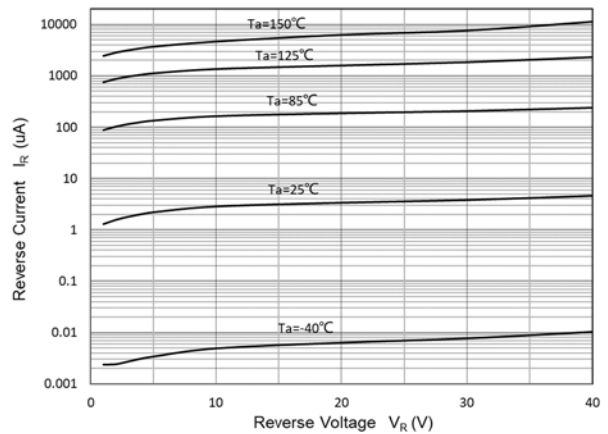


Fig 4: Typical Reverse Characteristics

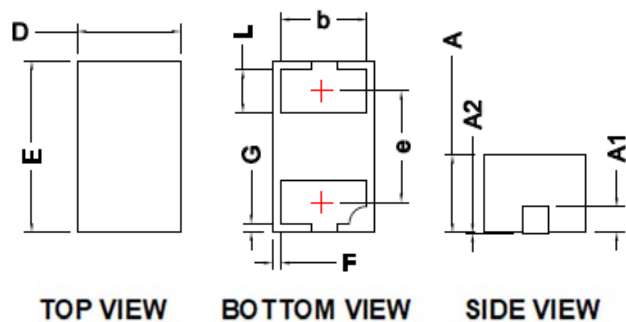


■ Ordering Information

Preferred P/N	Packing code	Unit weight(mg)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
MBR1040L2	F1	Approximate 0.9	10000	100000	400000	Tape & Reel

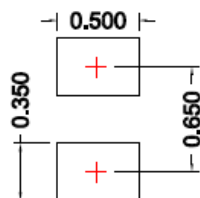


■ Outline Dimensions



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
D	0.50	0.60	0.70
E	0.90	1.00	1.10
A	0.35	0.45	0.55
A1	0.15 BSC		
A2			0.10
F	0.005		
G	0.005		
L	0.15	0.25	0.35
b	0.41	0.50	0.59
e	0.65 BSC		

■ Suggested Pad Layout



UNIT: mm



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