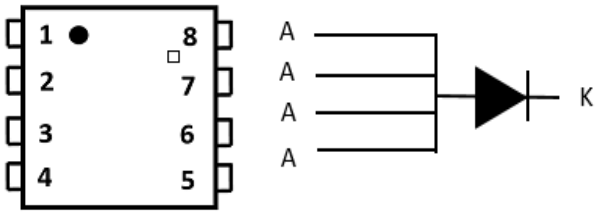
Schottky Diodes



Features

- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package**:PDFN5060-8L
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity**: As marked

■Maximum Ratings (Tj=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRL30100P5
Device marking code			MBRL30100P5
Repetitive Peak Reverse Voltage	V_{RRM}	V	100
Average Rectified Output Current @60Hz sine wave, R-load, Tc=121℃	I_O	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Tj=25℃	I_{FSM}	A	250
Current Squared Time @1ms≤t≤8.3ms Tj=25℃,	I^2t	A^2s	259
Typical junction capacitance @1MHz and Applied Reverse Voltage of 4.0 V.D.C.	Cj	nF	1.4
Storage Temperature	T_{stg}	℃	-55 ~ +150
Junction Temperature	Tj	℃	-55 ~ +150

■Electrical Characteristics (Tj=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Peak Forward Voltage	V_{FM}	V	I_{FM}=30.0A Tj=25℃	0.5	0.81	0.85
			I_{FM}=30.0A Tj=125℃	-	0.75	0.80
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	mA	V_{RM}=V_{RRM} Tj=25℃	-	-	0.10
	I_{RRM2}		V_{RM}=V_{RRM} Tj=125℃	-	-	20

■Thermal Characteristics （Tj=25℃ Unless otherwise specified）

PARAMETER		SYMBOL	UNIT	MBRL30100P5
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	℃/W	2.0

■Characteristics (Typical)

FIG1:Io -Tc Curve

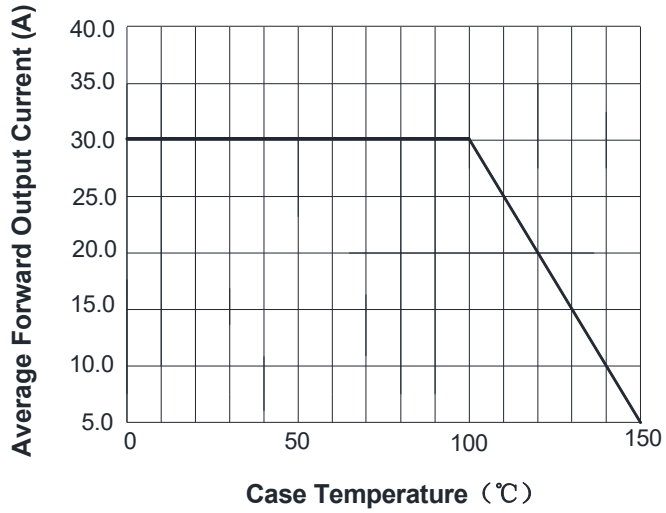


FIG2:Surge Forward Current Capability

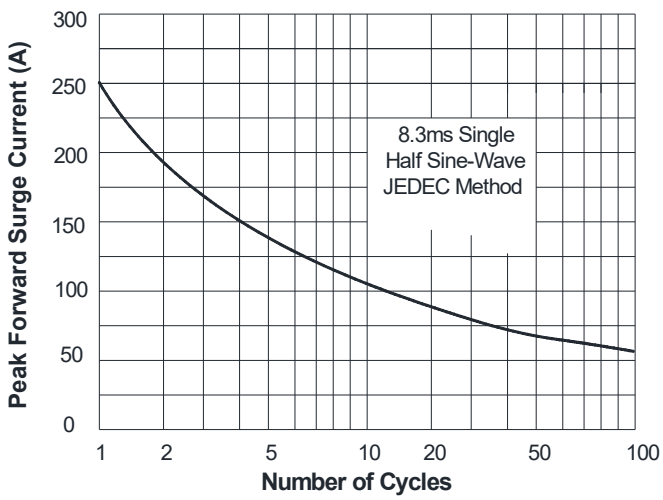


FIG3: Forward Voltage

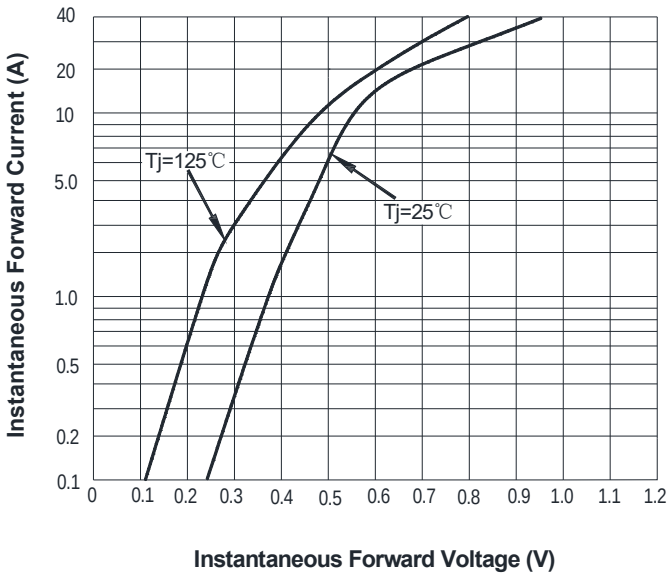
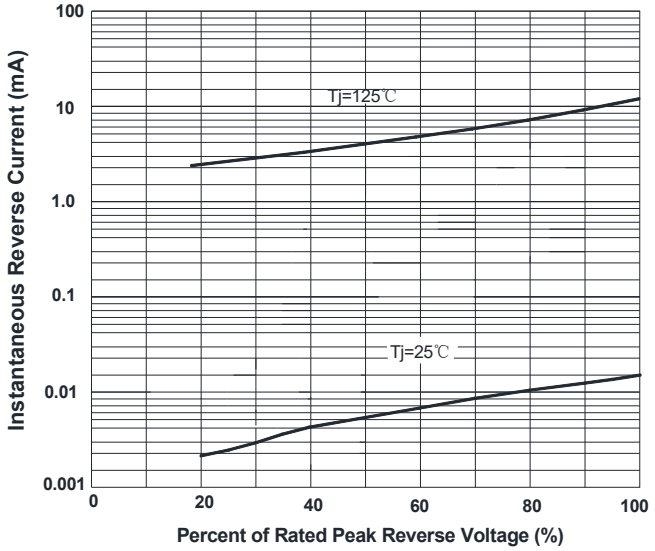
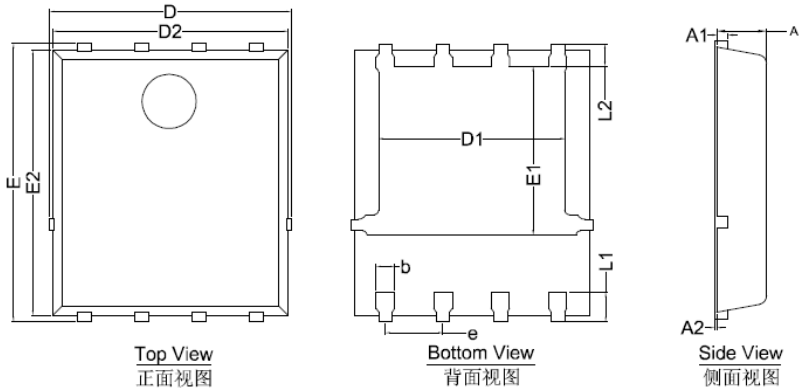


FIG.4: Instantaneous Reverse Characteristics

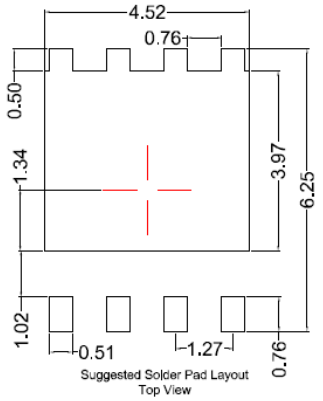


■Outline Dimensions



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
D	5.15	5.35	5.55
E	5.95	6.15	6.35
A	1.00	1.10	1.20
A1		0.254 BSC	
A2			0.10
D1	3.92	4.12	4.32
E1	3.52	3.72	3.92
D2	5.00	5.20	5.40
E2	5.66	5.86	6.06
L1	0.56	0.66	0.76
L2		0.50 BSC	
b	0.31	0.41	0.51
e		1.27 BSC	

Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.10mm.
3.The pad layout is for reference purposes only.



Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website http:// www.21yangjie.com , or consult your nearest Yangjie's sales office for further assistance.