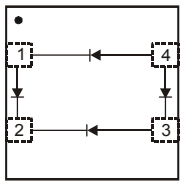
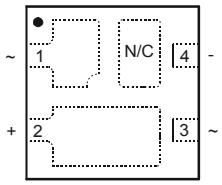
Bridge Rectifiers

SBR05M100BLP

DFN3030-4



Top View
Device Schematic



Top View
Pin Configuration

■ Features

- Ultra Low Leakage Current
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150ºC Operating Junction Temperature
- Lead Free Finish, RoHS Compliant, “Green” Device

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_{RM}		
RMS Reverse Voltage	$V_{R(RMS)}$	70	
Average Rectified Output Currents	I_O	500	mA
Non-Repetitive Peak Forward Surge Current @ 8.3ms	I_{FSM}	8	A
Power Dissipation	P_d	560	mW
Thermal Resistance Junction to Ambient (Note.1)	$R_{\theta JA}$	222	℃/W
Thermal Resistance Junction to Ambient (Note.2)		149	
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

Note.1: FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per

Note.2: Polymide PCB, 2 oz. copper; minimum recommended pad layout per

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_R	I_R= 250 uA	100			V
Forward voltage	V_F	I_F= 0.25 A,T_J=25℃			0.6	
		I_F= 0.5 A,T_J=25℃			0.73	
		I_F= 0.5 A,T_J=125℃			0.63	
Reverse voltage leakage current	I_R	V_R= 100 V, T_J=25℃			25	uA
		V_R= 100 V, T_J=125℃			250	

■ Marking

Marking	** DA

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■ Typical Characterisitics

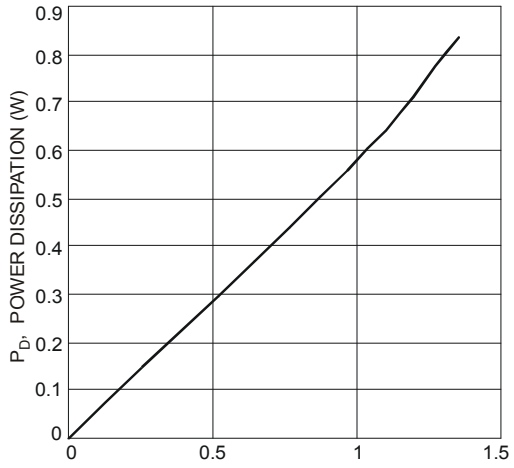


Fig. 1 Forward Power Dissipation

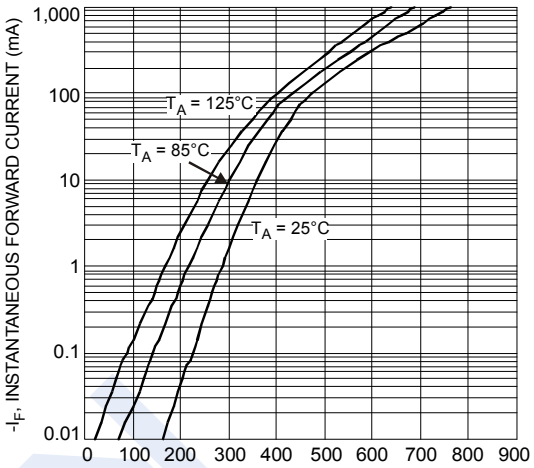


Fig. 2 Typical Forward Characteristics

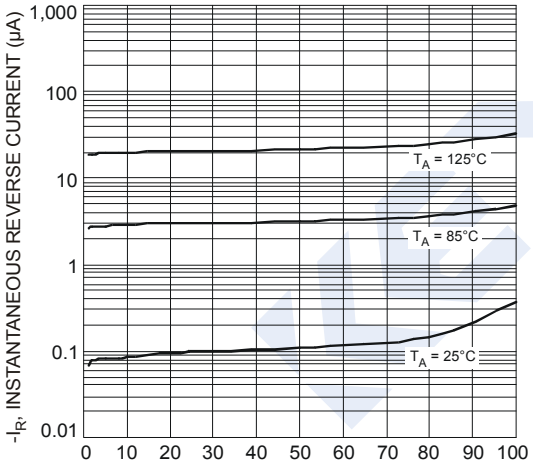


Fig. 3 Typical Reverse Characteristics

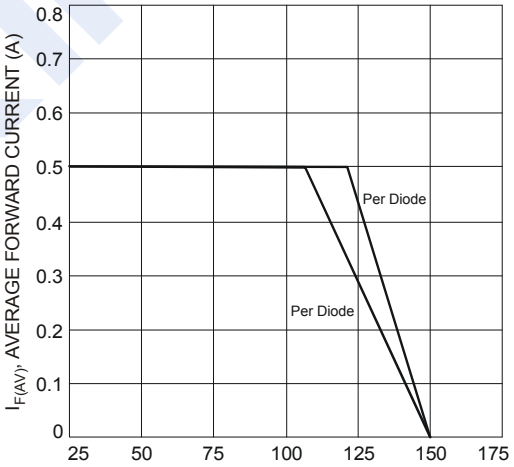


Fig. 4 Forward Current Derating Curve

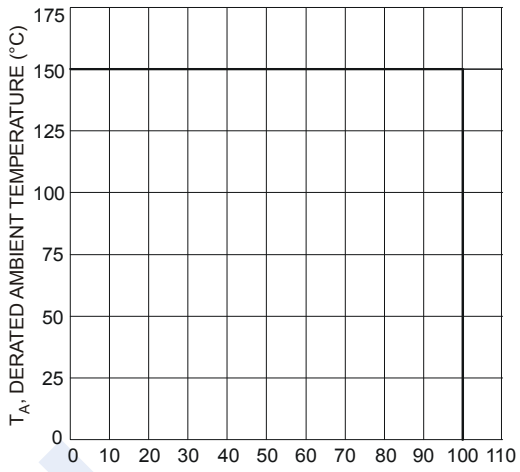
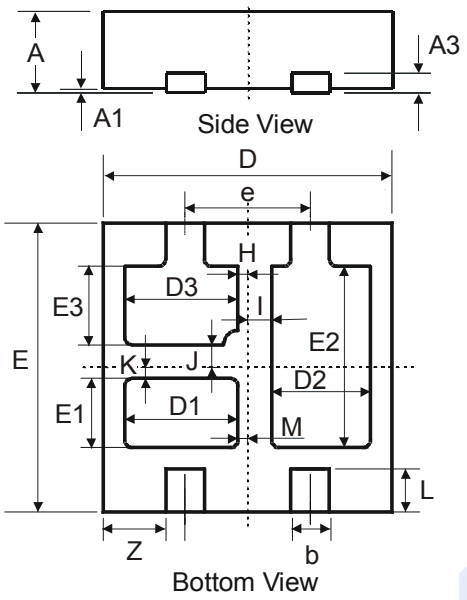


Fig. 5 Operating Temperature Derating

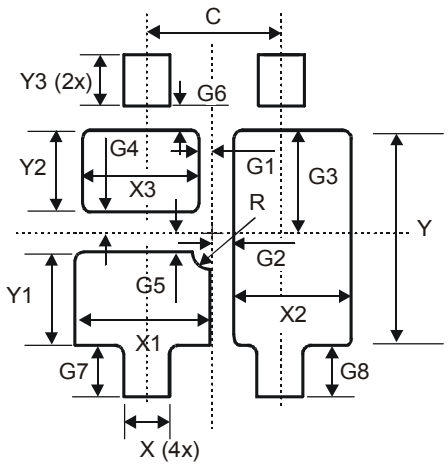
Package Outline Dimensions

DFN3030-4



DFN3030-4			
Dim	**Min**	**Max**	**Typ**
A	0.57	0.63	0.60
A1	0	0.05	0.02
A3	-	-	0.15
b	0.35	0.45	0.40
D	2.90	3.10	3.00
D1	1.075	1.275	1.175
D2	0.925	1.125	1.025
D3	1.075	1.275	1.175
E	2.90	3.10	3.00
e	-	-	1.30
E1	0.615	0.815	0.715
E2	1.78	1.98	1.88
E3	0.715	0.915	0.815
H	0.05	0.15	0.10
I	0.20	0.30	0.25
J	0.185	0.285	0.235
K	0.065	0.165	0.115
L	0.30	0.60	0.45
M	0.05	0.15	0.10
Z	-	-	0.65
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
C	1.300
G1	0.100
G2	0.150
G3	0.830
G4	0.115
G5	0.135
G6	0.170
G7	0.500
G8	0.500
R	0.150
X	0.500
X1	1.375
X2	1.225
X3	1.175
Y	1.980
Y1	1.015
Y2	0.715
Y3	0.650