B5819WD1-Q1

1A Silicon Schottky Barrier Diode - 40V

Features

- Small Surface Mounting Type
- Ideal for Automated Placement
- Low current leakage
- Low Power Losses, High Efficiency
- Low Forward Voltage Drop
- High Surge Capability
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

DFN-2L(0402)

Mechanial Characteristics

- Package: DFN-2L
- Lead Finish:Matte Tin
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Marking Code: 40 or 4A

Pin Configuration(Top view)

Applications

- Low Voltage
- High-Frequency Inverters
- Free Wheeling
- Polarity Protection

Absolute Maximum Ratings (T_A=25°C, unless otherwise noted)

Parameters	Symbol	Limit	Unit
Reverse Voltage (Repetitive Peak)	V_{RRM}	40	V
Average Rectified Output Current	I_O	1	A
Non-repetitive Peak Forward Surge Current@t=8.3ms	I_{FSM}	7	A
Power Dissipation	P_D	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	400	℃/W
Junction Temperature	T_J	125	℃
Storage Temperature	T_{STG}	-55 ~ +125	℃

Electrical Characteristics (T_A=25ºC, unless otherwise noted)

Parameters	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Breakdown Voltage	V_{BR}	I_R=1mA	40			V
Reverse Current	I_R	V_R=40V		10	40	uA
Forward Voltage	V_F	I_F=100mA			0.38	V
		I_F=200mA			0.42	
		I_F=500mA			0.49	
		I_F=700mA			0.55	
		I_F=1A			0.61	

Typical Characteristics

FIG.1: Typical forward characteristics

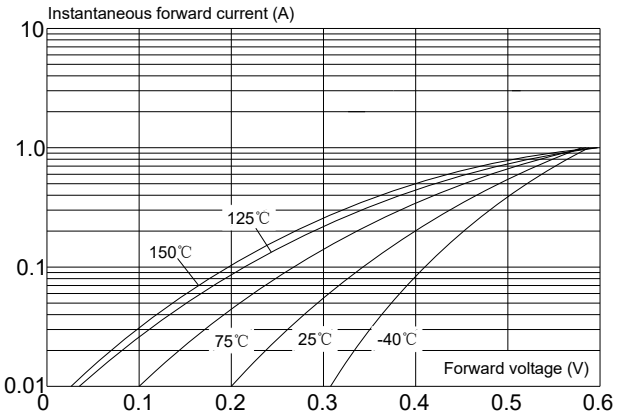


FIG.2: Typical reverse characteristics

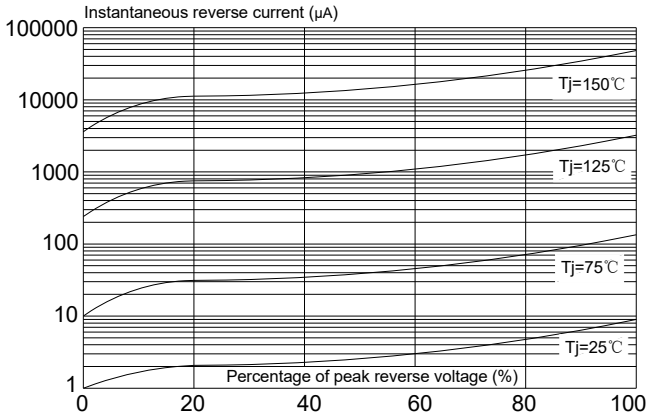


FIG.3: Maximum non-repetitive peak forward surge current

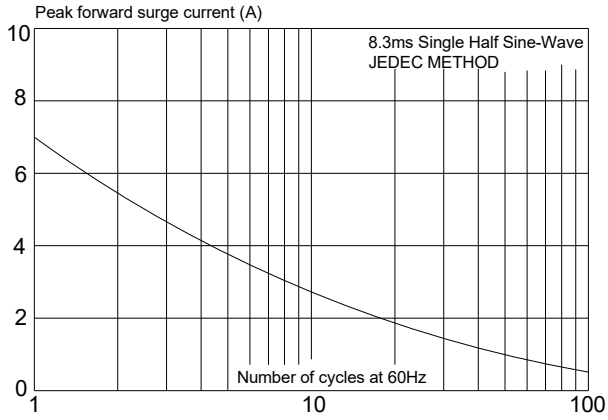
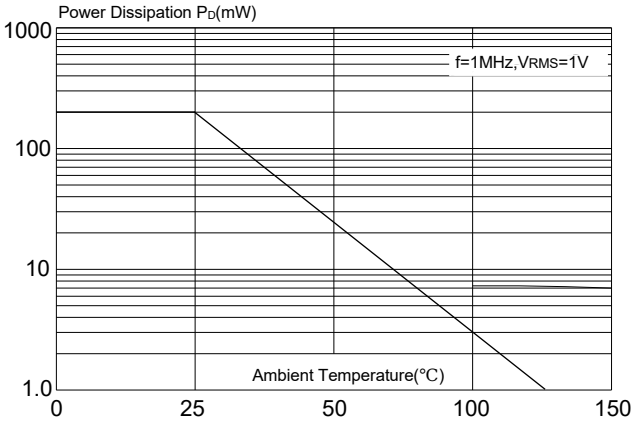
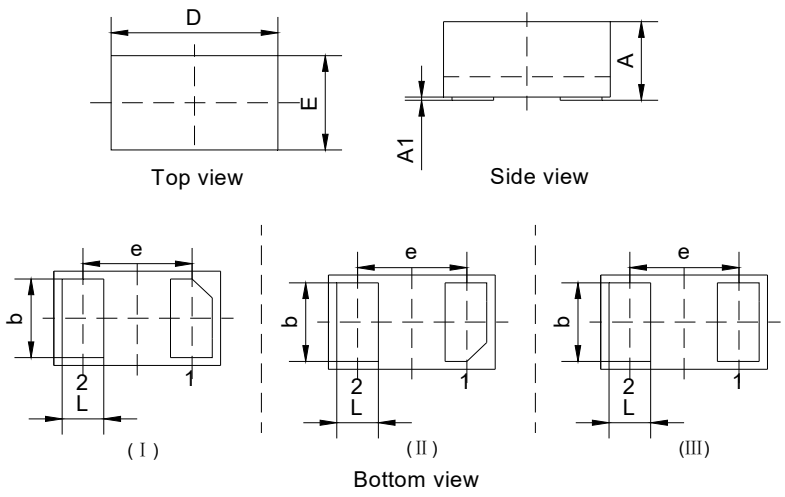


FIG.4: Power Derating Curve



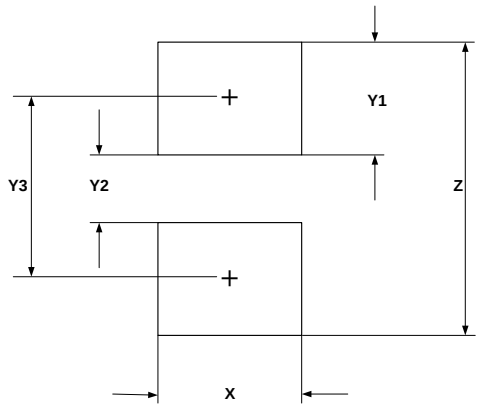
Package Outline Dimensions

DFN-2L



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.40	0.50	0.55	0.016	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
D	0.95	1.00	1.05	0.037	0.039	0.041
e	0.65 BSC			0.026 BSC		
E	0.55	0.60	0.65	0.022	0.024	0.026
L	0.20	0.25	0.30	0.008	0.010	0.012

Suggested Solder Pad Layout



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.60	0.024
Y1	0.50	0.020
Y2	0.30	0.012
Y3	0.80	0.032
Z	1.30	0.052