

FEATURES

- UL recognition, file #E313149
- Glass passivated chip junction
- Ideal for automated placement
- High surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for SMPS, lighting ballast, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

MECHANICAL DATA

- **Package:** DBLS
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, Halogen free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

MAXIMUM RATINGS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	DBL101S	DBL102S	DBL103S	DBL104S	DBL105S	DBL106S	DBL107S
Device marking code			DBL101S	DBL102S	DBL103S	DBL104S	DBL105S	DBL106S	DBL107S
Maximum Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	VRMS	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	VDC	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load, T _c =134°C	I _O	A	1.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C	IFSM	A	30						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C			60						
Current squared time @1ms ≤ t ≤ 8.3ms T _j =25°C, Rating of per diode	I ² t	A ² s	3.7						
Storage temperature	T _{stg}	°C	-55 ~ +150						
Junction temperature	T _j	°C	-55 ~ +150						

ELECTRICAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	DBL101S	DBL102S	DBL103S	DBL104S	DBL105S	DBL106S	DBL107S
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =0.5A	1.0						
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	5						
			T _j =125°C	100						
Typical junction capacitance	C _j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	12						

■ THERMAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	DBL101S	DBL102S	DBL103S	DBL104S	DBL105S	DBL106S	DBL107S
Typical Thermal Resistance	R θ J-A	°C/W	40.0						
	R θ J-L		15.0						
	R θ J-C		8.0						

Note: Device mounted on P.C.B with 35mm*25mm*1.7mm

■ PACKAGING INFORMATION

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
DBL101S ~ DBL107S	B1	Approximate 0.32	50	5000	20000	TUBE
DBL101S ~ DBL107S	F1	Approximate 0.32	1500	3000	21000	REEL

■ CHARACTERISTICS (TYPICAL)

FIG1: I_o-T_c Curve

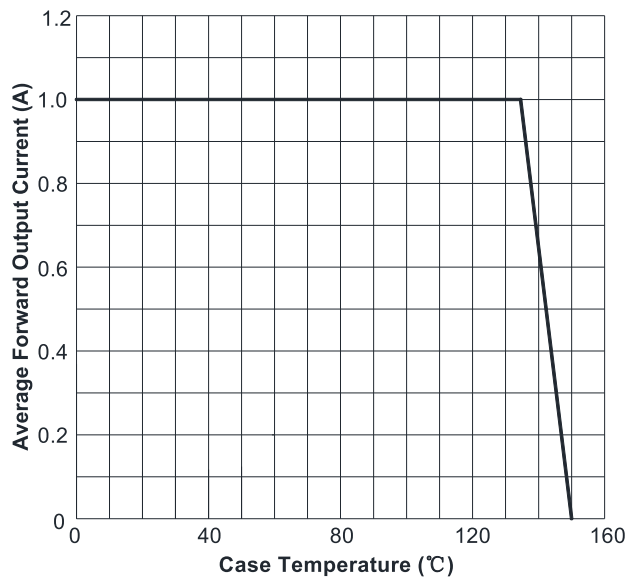


FIG2: Surge Forward Current Capability

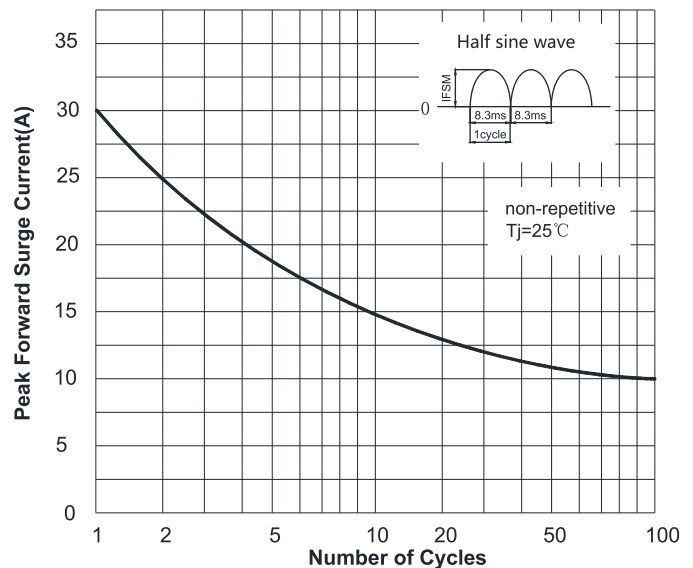


FIG3: Typical Forward Voltage

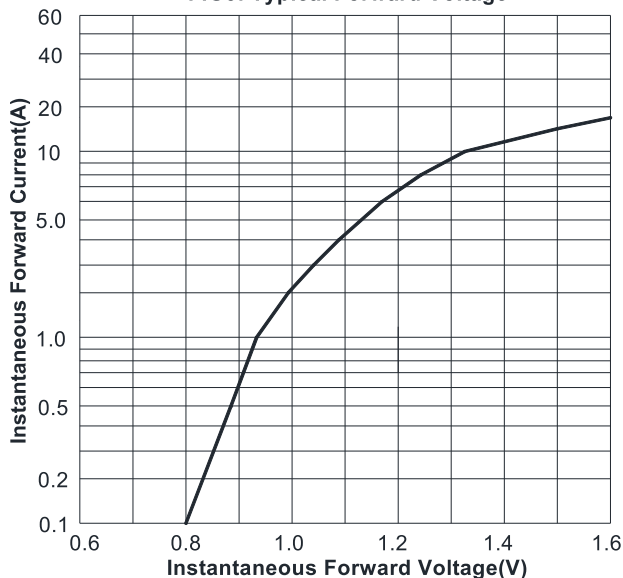
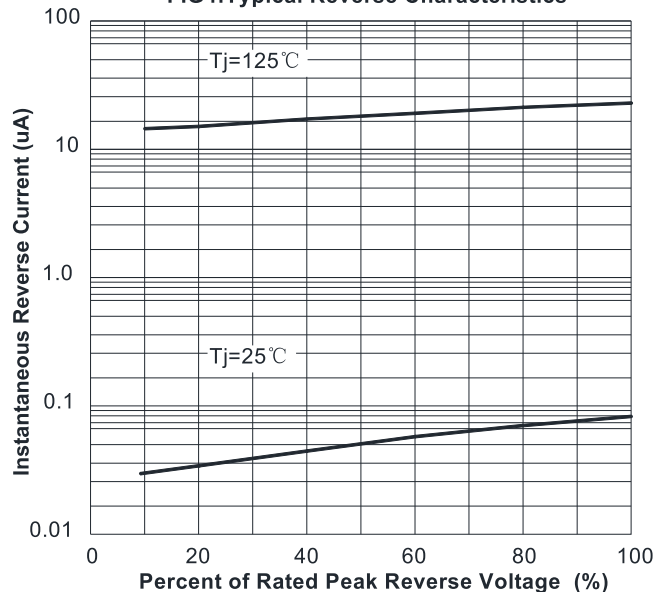
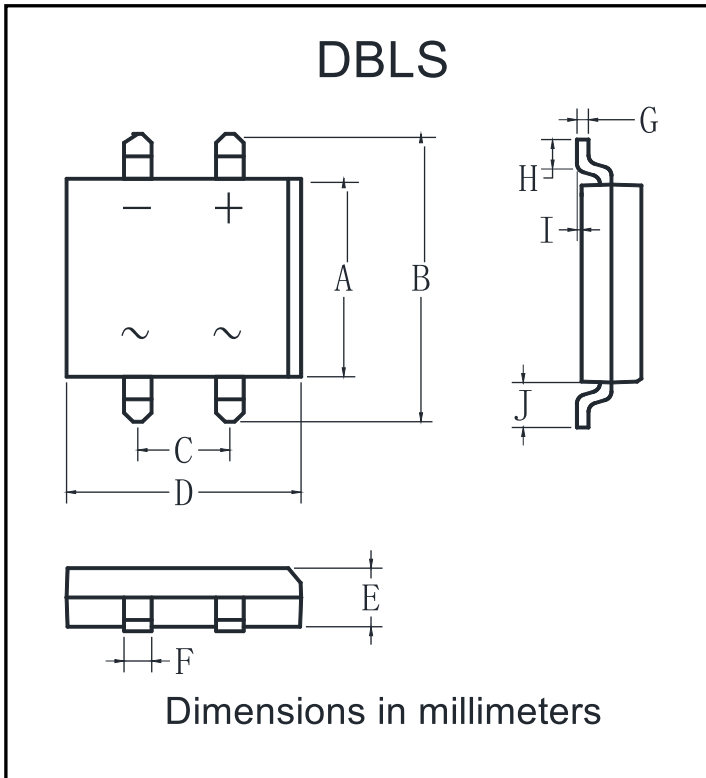


FIG4: Typical Reverse Characteristics

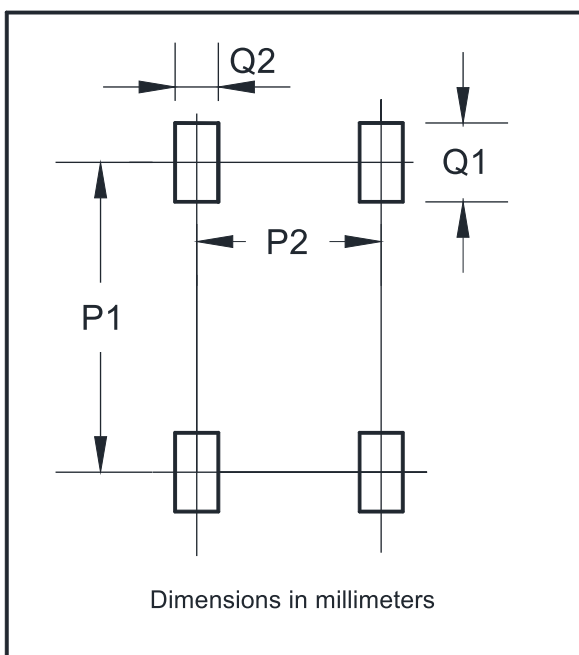


■ **OUTLINE DIMENSIONS**



DBLS		
Dim	Min	Max
A	6.20	6.50
B	9.60	10.30
C	5.00	5.20
D	8.13	8.51
E	2.35	2.45
F	1.02	1.2
G	0.22	0.33
H	1.02	1.53
I	0	0.30
J	1.80	2.10

■ **SUGGESTED PAD LAYOUT**



Dim	Min
P1	8.73
P2	5.12
Q1	2.22
Q2	1.2