A Product Line of Diodes Incorporated | LITE-ON SEMICONDUCTOR

DF1506S~DF1514S(LS)

SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE – 600 to 1400 Volts FORWARD CURRENT – 1.5 Amperes

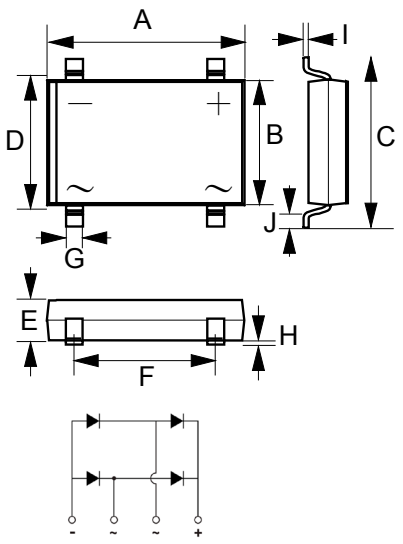
FEATURES

- Rating to 1400V PRV
- Ideal for printed circuit board
- Low forward voltage drop high current capability
- Reliable construction utilizing molded plastic technique
- UL recognized file # E95060
- DF-S
- Available in "Green" Package: DF-S
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Case Material: molding compound, UL flammability classification 94V-0
- Polarity: As marked on the body
- Mounting Position: Any
- Weight: 360mg (Approximate)

DF-S



DF-S		
DIM	MIN	MAX
A	8.20	8.50
B	6.20	6.50
C	9.80	10.30
D	7.40	7.90
E	2.40	2.60
F	5.00	5.20
G	1.00	--
H	.076	.330
I	.220	.300
J	1.02	1.53
All dimension in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	DF1506S	DF1508S	DF1510S	DF1512S	DF1514S	UNIT
Device marking code	Note	DF1506S	DF1508S	DF1510S	DF1512S	DF1514S	--
Maximum repetitive peak reverse voltage	V_{RRM}	600	800	1000	1200	1400	V
Maximum DC blocking voltage	V_{DC}	600	800	1000	1200	1400	V
Average rectified output current per device @T_C = 120°C	$I_{(AV)}$	1.5					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC METHOD)	I_{FSM}	50					A
Peak forward surge current 1 ms single half sine-wave superimposed on rated load (JEDEC METHOD)	I_{FSM}	100					A
I^2t rating for fusing (t = 8.3ms)	I^2t	10.4					A^2S
Operating and storage temperature range	T_J ,T_{STG}	-55 to +150					°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	MAX.	UNIT
Forward voltage	I_F = 1.5A	T_J= 25°C	V_F	1.1	V
Leakage current	V_R at rated	T_J= 25°C T_J = 125°C	I_R	10 500	uA
Typical junction capacitance (Note 4)			C_J	25	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 5)	$RthJ_A$ $RthJ_C$ $RthJ_L$	40 8 20	°C/W

Note :

REV. 17, SEP.-2021, KBDA02

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compound
4. Measured at 1.0MHz and applied reverse voltage of 4.0V DC
5. Thermal resistance junction to ambient, case and lead in accordance with JESD-51. Unit mounted on P.C.B with 0.5 x 0.5" (13 x 13 mm) copper pad per pin.

FIG.1- FORWARD CURRENT DERATING CURVE

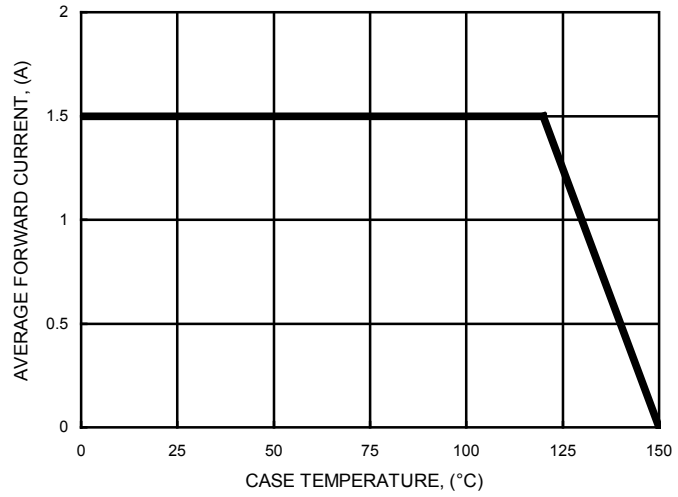


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

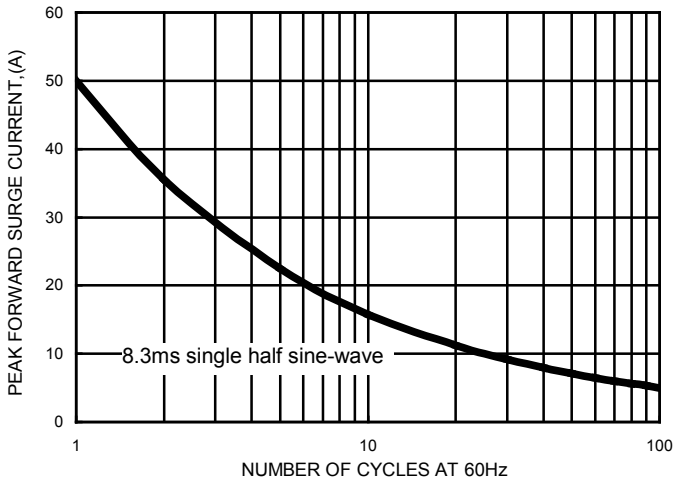


FIG.3- TYPICAL FORWORD CHARACTERISTICS

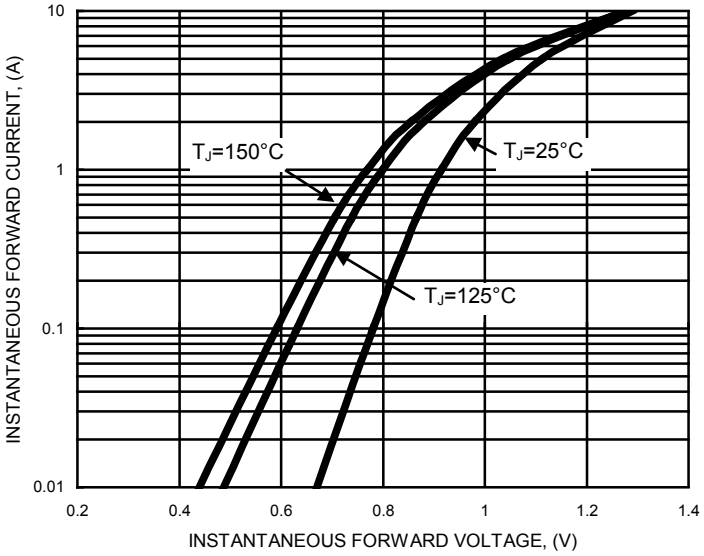


FIG.4- TYPICAL JUNCTION CAPACITANCE

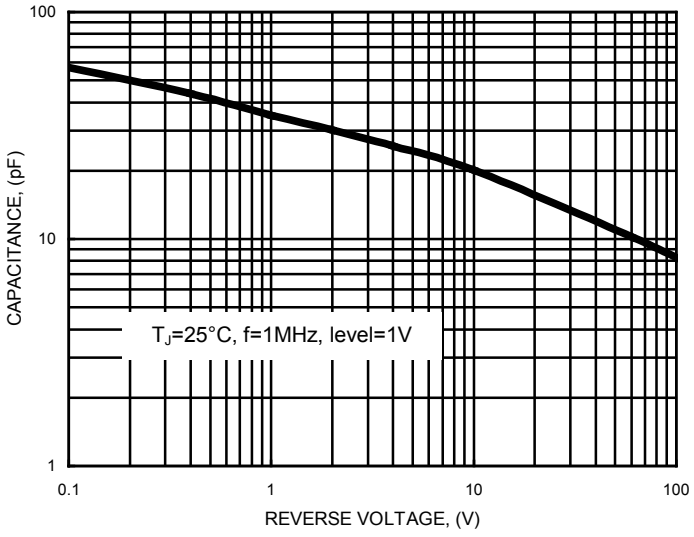


FIG.5- NON-REPETITIVE SURGE CURRENT

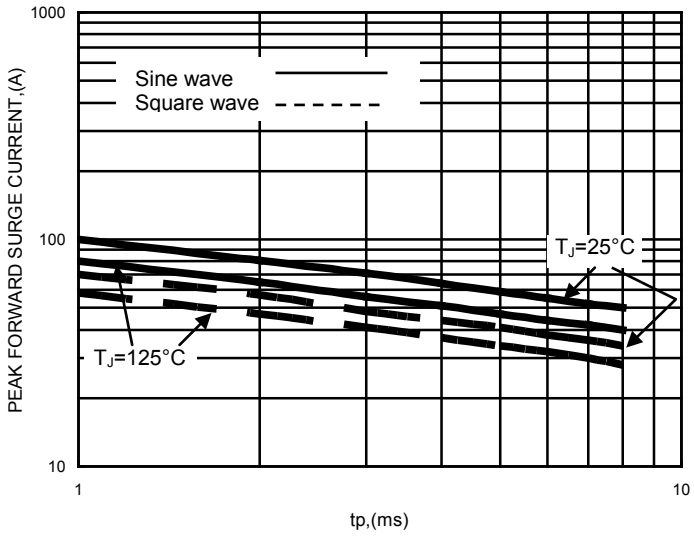
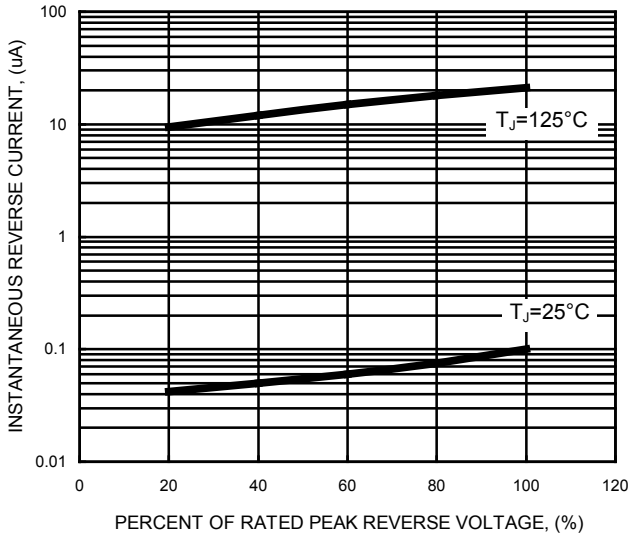


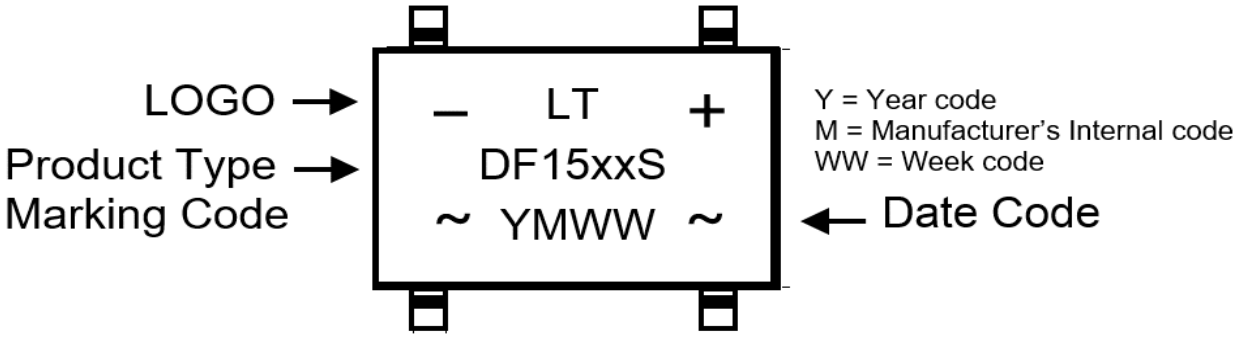
FIG.6- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

Part Number	Case	Packaging
DF1506S_HF	DF-S	1500/ Tape & Reel
DF1508S_HF	DF-S	1500/ Tape & Reel
DF1510S_HF	DF-S	1500/ Tape & Reel
DF1512S_HF	DF-S	1500/ Tape & Reel
DF1514S_HF	DF-S	1500/ Tape & Reel

Marking Information :



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SEMICONDUCTOR

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