LITE-ON SEMICONDUCTOR

DF005S thru DF10S

SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE – 50 to 1000 Volts FORWARD CURRENT – 1.0 Ampere

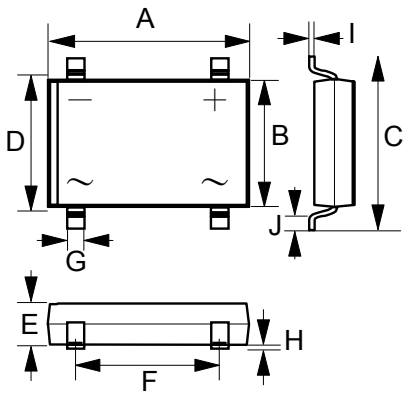
FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Low forward voltage drop high current capability
- Reliable low cost construction utilizing molded plastic technique
- UL recognized file # E95060

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	DF005S	DF01S	DF02S	DF04S	DF06S	DF08S	DF10S	UNIT
Device marking code	Note	DF005S	DF01S	DF02S	DF04S	DF06S	DF08S	DF10S	--
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average rectified output current per device @T_A= 40°C	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	I_{FSM}	50							A
Peak forward surge current 1ms 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 = 1.0A	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 1)			C_J	25	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 2)	$RthJ_A$ $RthJ_C$ $RthJ_L$	40 8 20	°C/W

Note :

(1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC

(2) 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.

REV. 10, APR.-2015, KBDA01

RATING AND CHARACTERISTIC CURVES
DF005S thru DF10S

LITEON

FIG.1- FORWARD CURRENT DERATING CURVE

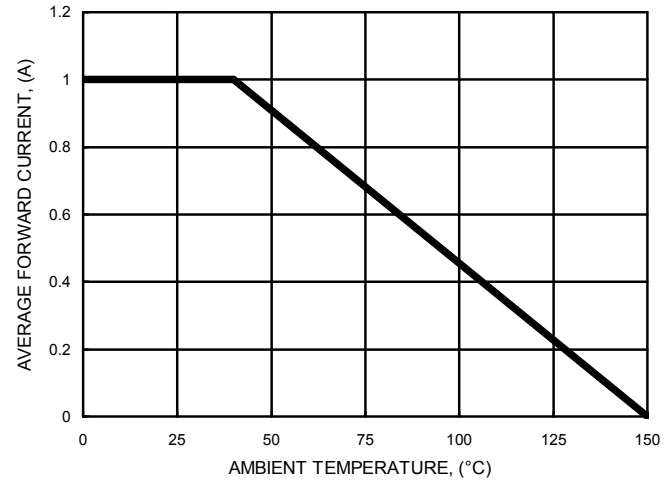


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

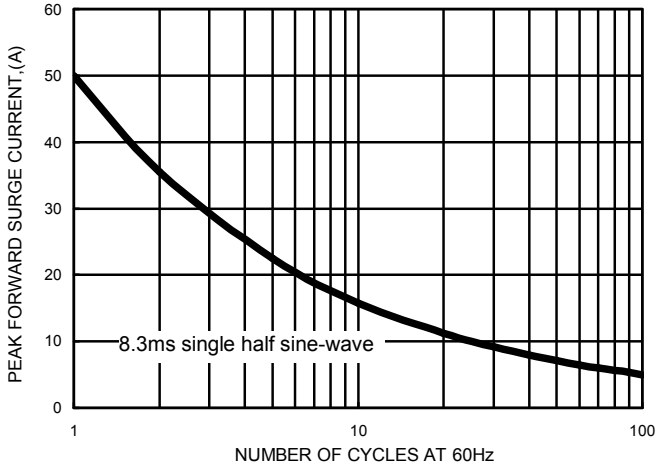


FIG.3- TYPICAL FORWORD CHARACTERISTICS

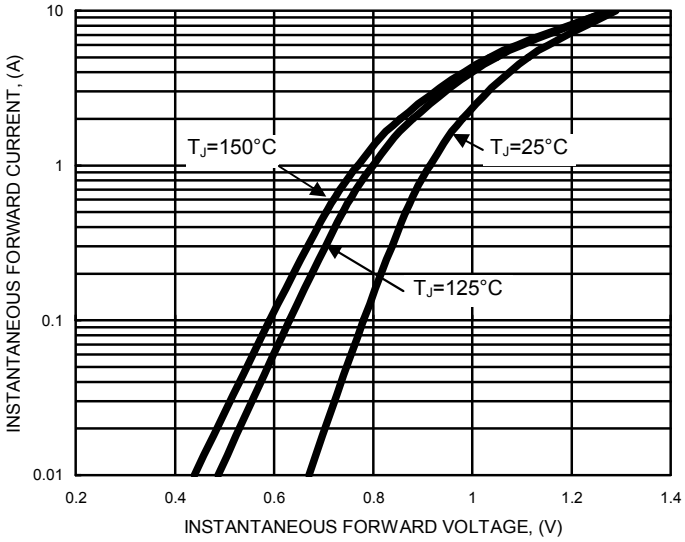


FIG.4- TYPICAL JUNCTION CAPACITANCE

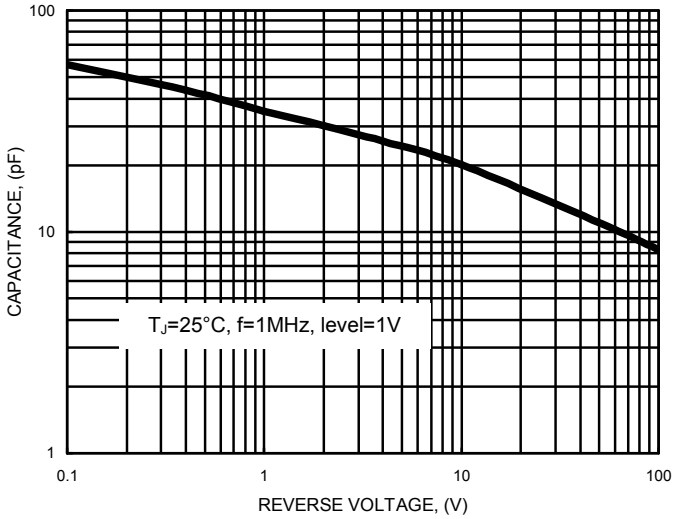


FIG.5- NON-REPETITIVE SURGE CURRENT

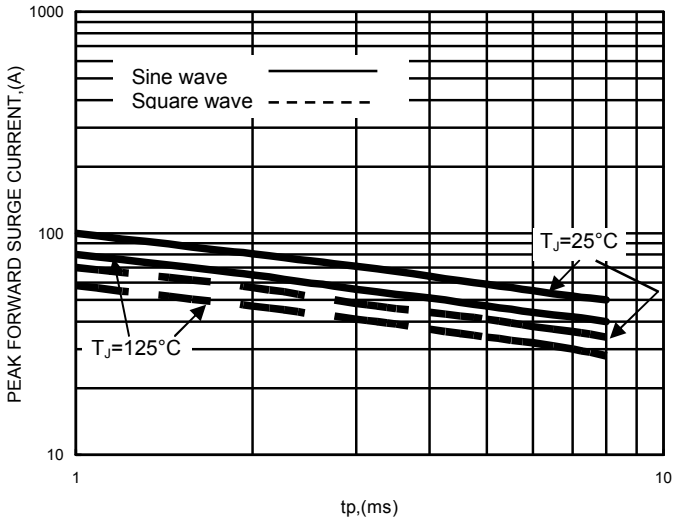
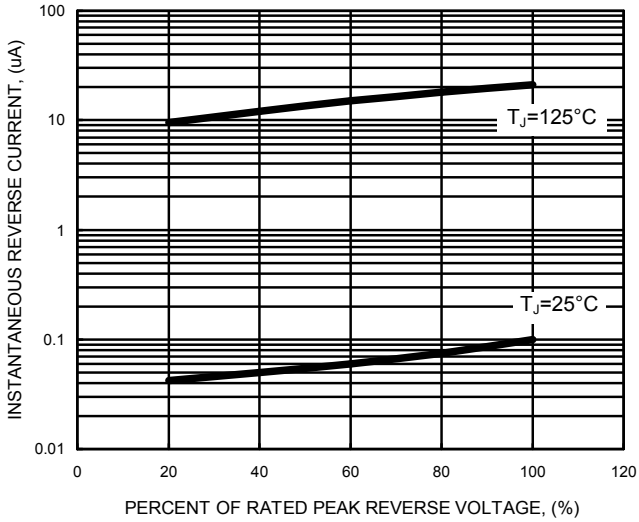


FIG.6- TYPICAL REVERSE CHARACTERISTICS



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