

**SURFACE MOUNT
GLASS PASSIVATED BRIDGE RECTIFIERS**

**REVERSE VOLTAGE – 50 to 1200 Volts
FORWARD CURRENT – 1.5 Amperes**

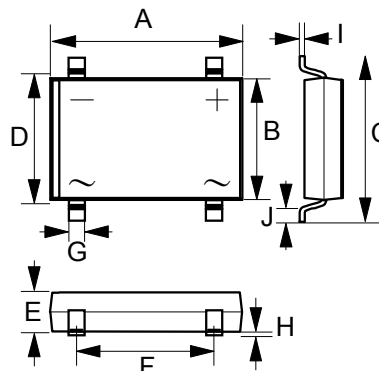
FEATURES

- Rating to 1200V 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	DF15005S	DF1501S	DF1502S	DF1504S	DF1506S	DF1508S	DF1510S	DF1512S	UNIT
Device marking code	Note	DF15005S	DF1501S	DF1502S	DF1504S	DF1506S	DF1508S	DF1510S	DF1512S	--
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	1200	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	1200	V
Average rectified output current per device @ $T_C = 120^\circ\text{C}$	$I_{(AV)}$	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
$I^2 t$ rating for fusing ($t < 8.3\text{ms}$)	$I^2 t$	10.4								A^2S
Operating and storage temperature range	T_J, T_{STG}	-55 to +150								$^\circ\text{C}$

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	MAX.	UNIT
Forward voltage	$I_F = 1.5\text{A}$	$T_J = 25^\circ\text{C}$	V_F	1.1	V
Leakage current	V_R at rated	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	I_R	10 500	μA
Typical junction capacitance (Note 1)			C_J	25	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 2)	R_{thJA}	40	$^\circ\text{C/W}$
	R_{thJC}	8	
	R_{thJL}	20	

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.

RATING AND CHARACTERISTIC CURVES DF1505S thru DF1512S



FIG.1- FORWARD CURRENT DERATING CURVE

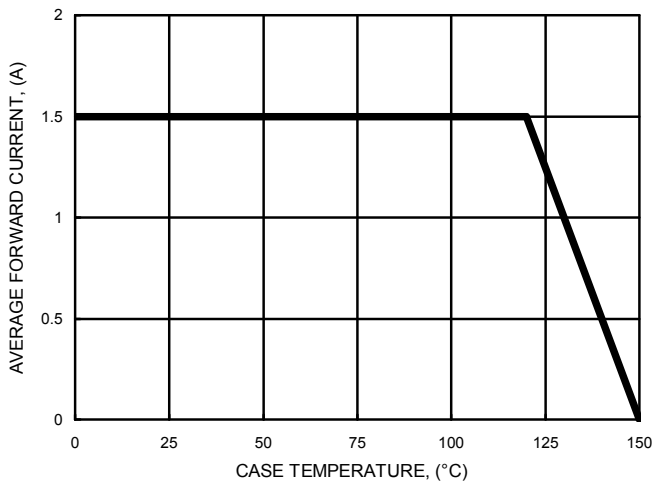


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

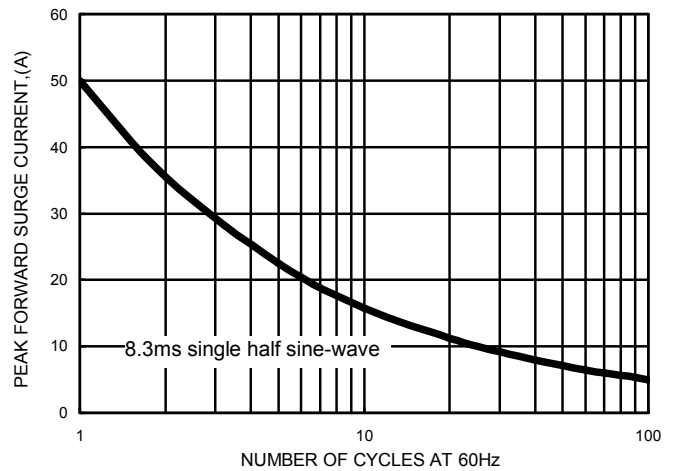


FIG.3- TYPICAL FORWARD CHARACTERISTICS

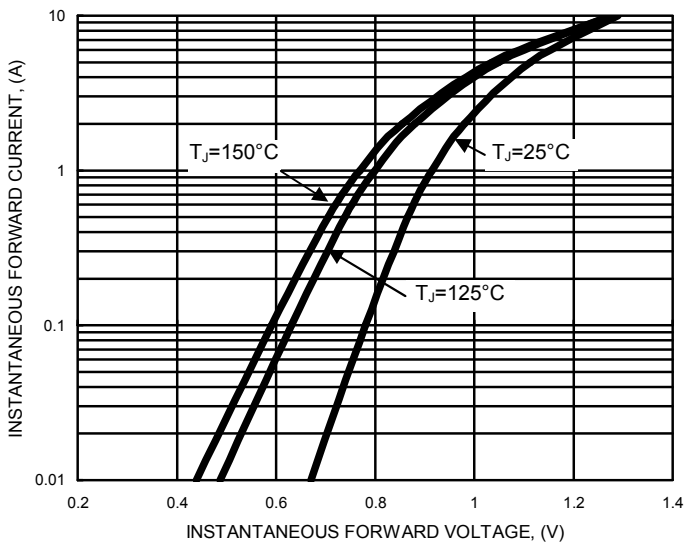


FIG.4- TYPICAL JUNCTION CAPACITANCE

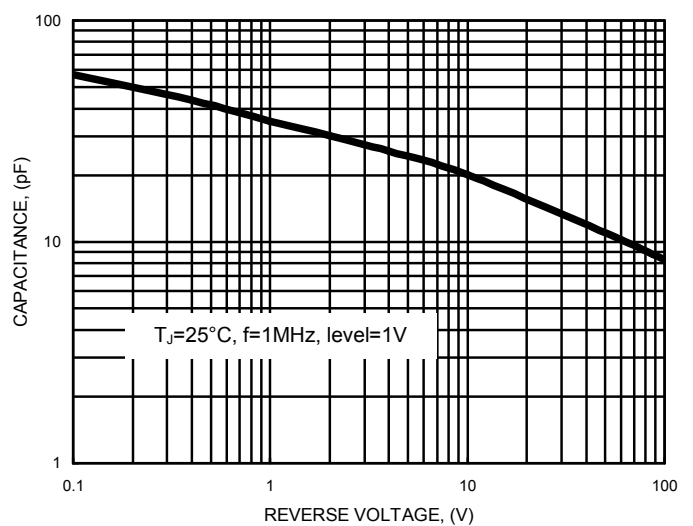


FIG.5- NON-REPETITIVE SURGE CURRENT

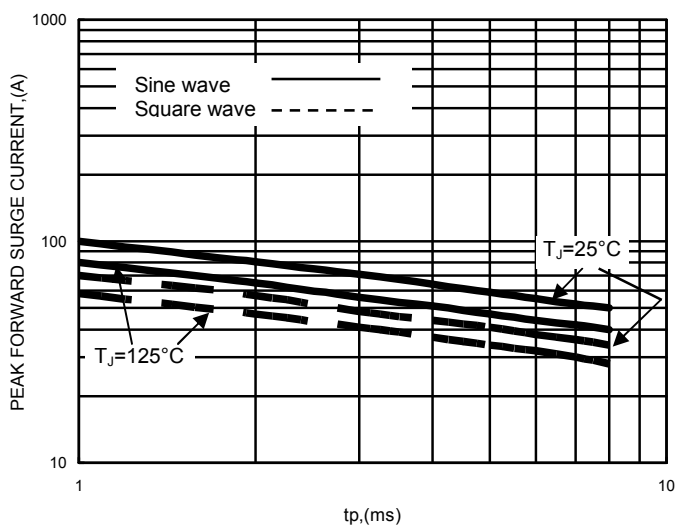
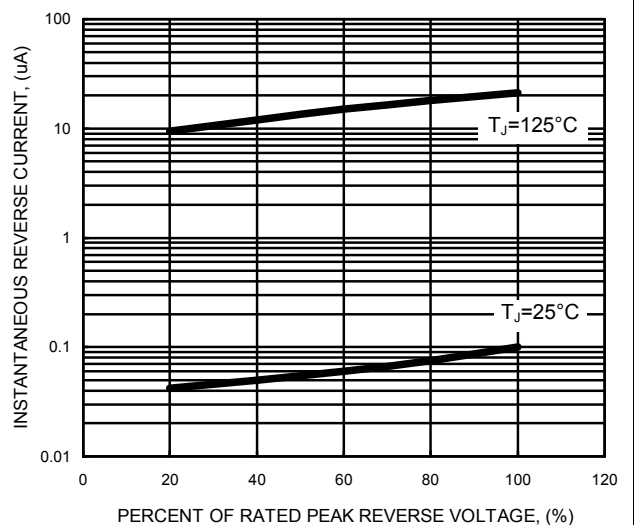


FIG.6- TYPICAL REVERSE CHARACTERISTICS



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