

VI. Bridge Rectifier

1.5A SMD Glass Passivated Bridge Rectifier (Low Profile Type) DF15005SL~DF1510SL (Package: DFS)

<p>FEATURES</p> <ul style="list-style-type: none"> • Glass passivated die construction • Reliable low cost construction utilizing molded plastic technique • High surge current capability • Small size, simple installation • Plastic material – UL Recognition Flammability Classification 94V-0 <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : Molded plastic • Terminals : Plated terminals • Polarity : Polarity symbols marked on body • Mounting position : Any • Handling precaution : None • Weight : 0.38 grams 	<p>Case: DFS Dimensions in inches and (millimeters)</p>
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Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristics	Symbol	DF	DF	DF	DF	DF	DF	DF	Units
		15005SL	1501SL	1502SL	1504SL	1506SL	1508SL	1510SL	
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at $T_a = 40$	I_o	1.5							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method)	I_{FSM}	50.0							Amps
Maximum instantaneous forward voltage drop per element at 1.5A	V_F	1.1							Volts
Maximum DC reverse current $T_j = 25$ at rated DC blocking voltage $T_j = 125$	I_R	10 500							μA
I^2t Rating for Fusing ($t < 8.3ms$)	I^2t	10.4							A^2s
Typical junction capacitance per element (Note 1)	C_j	25							PF
Typical thermal resistance (Note 2)	Rth-JA	40							/ W
Operating junction and storage temperature range	T_j, T_{stg}	-55 to +150							

Notes:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts D.C.

2. Thermal resistance junction to ambient mounted on PC Board with 13.0 x 13.0 mm copper pads.

Ratings and Characteristic Curves of DF15005SL~DF1510SL

FIG.1-FORWARD CURRENT DERATING CURVE

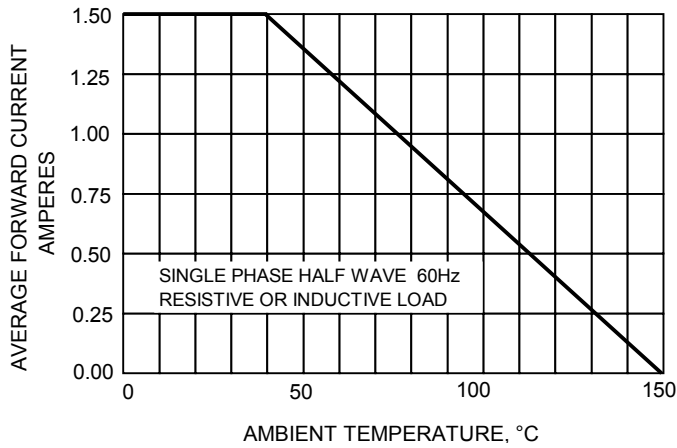


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

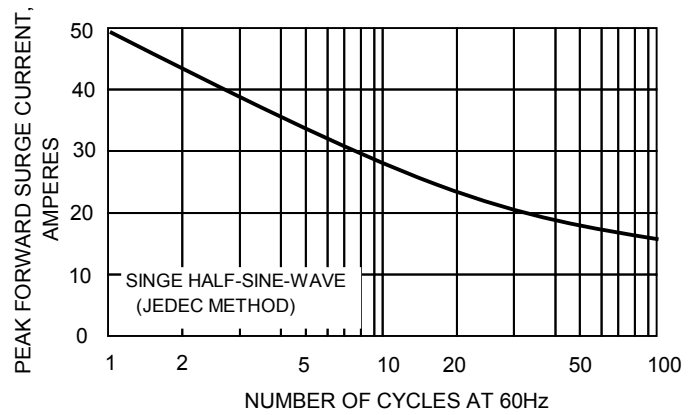


FIG.3-TYPICAL JUNCTION CAPACITANCE

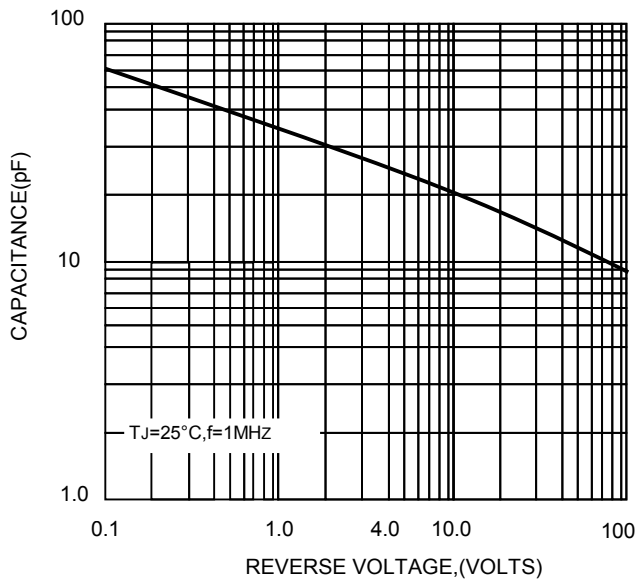


FIG.4-TYPICAL FORWARD CHARACTERISTICS

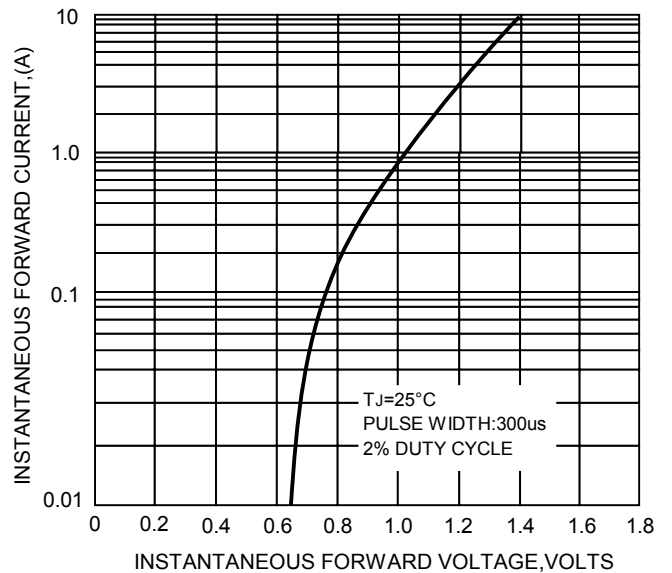


FIG.5-TYPICAL REVERSE CHARACTERISTICS

