



Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers

Reverse Voltage 50V to 1000V Forward Current 1.0 Ampere

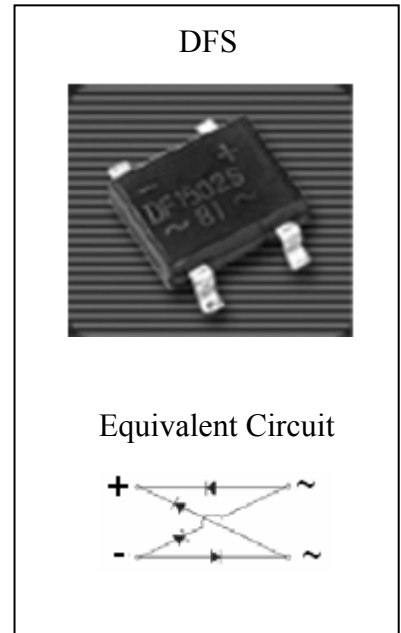
DF005S thru DF10S

Features

- Ideal for printed circuit boards
- Applicable for automotive insertion
- High surge current capability
- Solder Dip 260°C, 40 seconds

Mechanical Data

- Case: DFS Molded plastic body, epoxy meets UL 94V-0 flammability rating
- Terminals: Matte tin plated, solderable per J-STD-002B and JESD22-B102D
- Polarity : as marked on body



Maximum Ratings and Electrical Characteristics

(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Type							Units
		DF005S DBS101	DF01S DBS102	DF02S DBS103	DF04S DBS104	DF06S DBS105	DF08S DBS106	DF10S DBS107	
Repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum instantaneous forward voltage drop per leg, I _F =0.5A	V _F	1.1							V
Maximum average forward output rectified current at T _A =40 °C	I _{F(AV)}	1 (Note 1)							A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	I _{FSM}	50							A
Rating for fusing (t<8.3ms)	I ² t	10							A ² s
Maximum DC reverse current at rated DC blocking voltage per leg	T _A =25 °C	5							μA
	T _A =125 °C	500							
Typical thermal resistance per leg (Note 1)	R _{θJA}	40							°C /W
	R _{θJL}	15							
Typical diode junction capacitance per leg @f=1MHz and applied 4V reverse voltage	C _J	25							pF
Storage temperature range	T _{stg}	-55 ~ +150							°C
Operating temperature range	T _J	-55 ~ +150							°C

Note : 1.Units mounted on PCB with 0.51”x0.51”(13 mmx13mm) copper pads.

Characteristic Curves

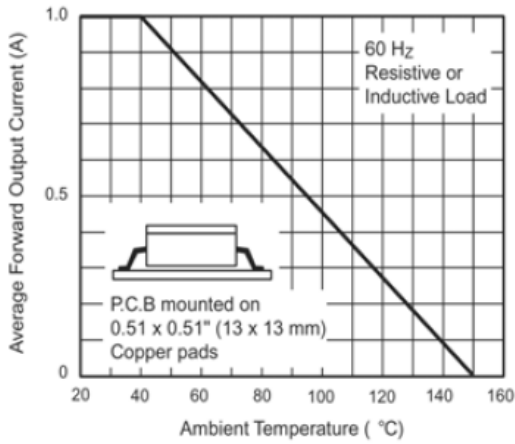


Figure 1. Derating Curve Output Rectified Current

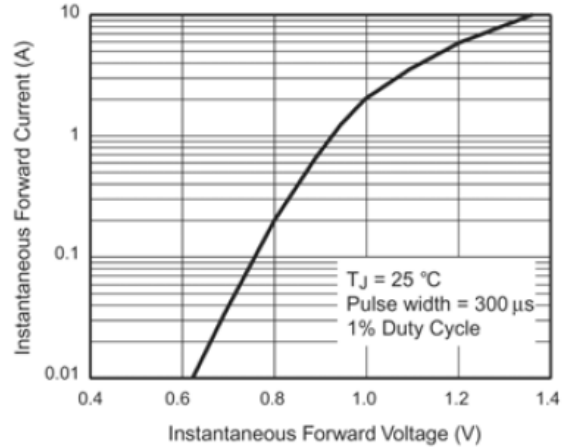


Figure 3. Typical Forward Characteristics Per Leg

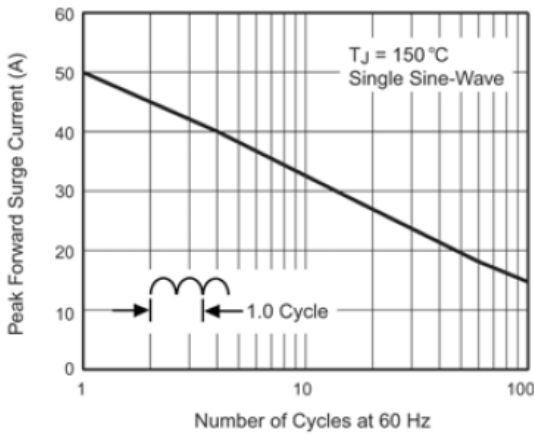


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

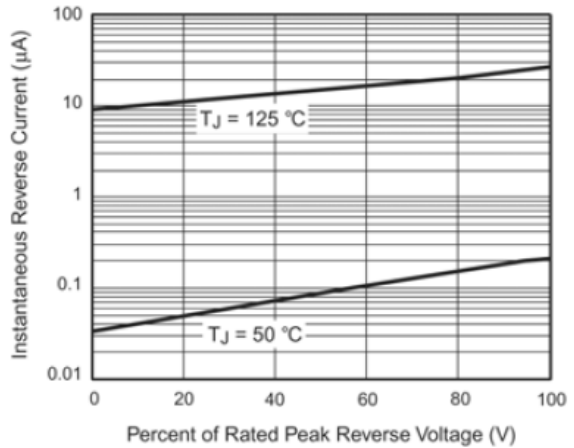


Figure 4. Typical Reverse Leakage Characteristics Per Leg

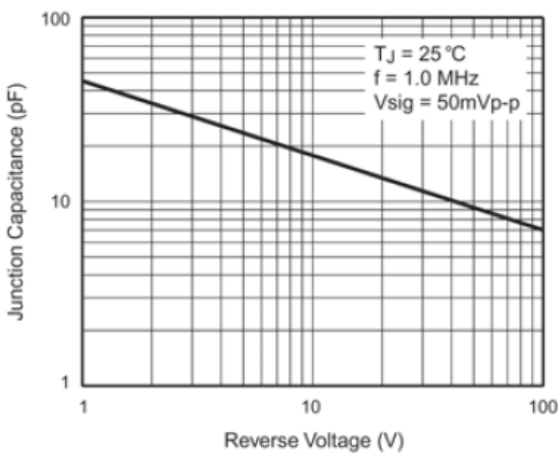


Figure 5. Typical Junction Capacitance Per Leg

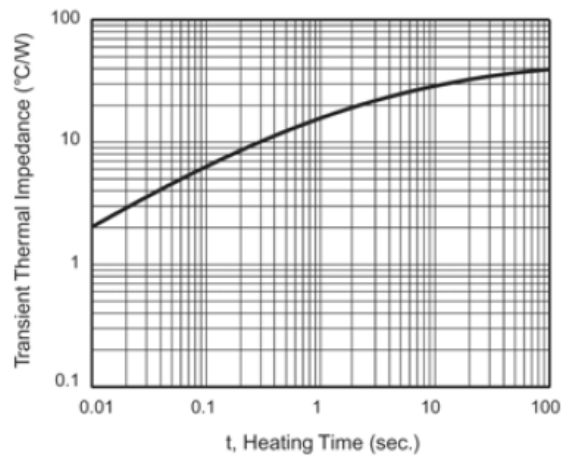
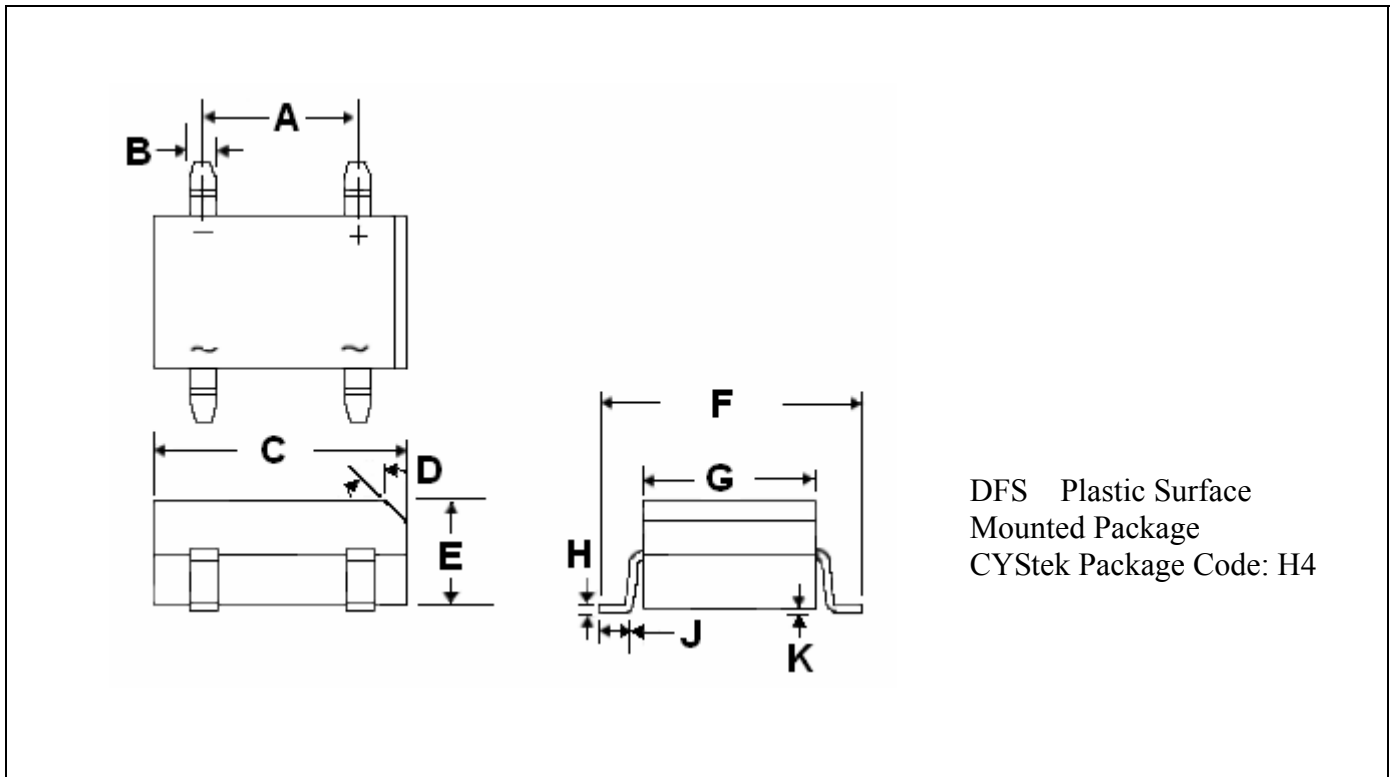


Figure 6. Typical Transient Thermal Impedance

DFS Dimension



DFS Plastic Surface Mounted Package
 CYStek Package Code: H4

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.196	0.205	5.00	5.20	F	0.386	0.404	9.80	10.30
B	0.040	0.047	1.02	1.20	G	0.245	0.255	6.20	6.50
C	0.320	0.335	8.13	8.51	H	0.009	0.013	0.241	0.330
D	45° (typ)		45° (typ)		J	0.040	0.060	1.016	1.524
E	0.120	0.130	3.05	3.30	K	0.003	0.013	0.076	0.330

Notes : 1.Controlling dimension : millimeters.
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material :

- Lead : 42 Alloy ; solder plating
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0

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