

DF01ST-G Datasheet



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DiGi Electronics Part Number	DF01ST-G-DG
Manufacturer	Comchip Technology
Manufacturer Product Number	DF01ST-G
Description	BRIDGE RECT 1PHASE 100V 1A DFS
Detailed Description	Bridge Rectifier Single Phase Standard 100 V Surface Mount DFS

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Purchase and inquiry

Manufacturer Product Number:

DF01ST-G

Series:

-

Diode Type:

Single Phase

Voltage - Peak Reverse (Max):

100 V

Voltage - Forward (Vf) (Max) @ If:

1.1 V @ 1 A

Operating Temperature:

-55°C ~ 150°C (Tj)

Package / Case:

4-SMD, Gull Wing

Base Product Number:

DF01

Manufacturer:

Comchip Technology

Product Status:

Obsolete

Technology:

Standard

Current - Average Rectified (Io):

1 A

Current - Reverse Leakage @ Vr:

10 µA @ 100 V

Mounting Type:

Surface Mount

Supplier Device Package:

DFS

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

SMD Glass Passivated Bridge Rectifiers

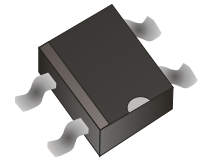


DF005S-G Thru. DF10S-G


Reverse Voltage: 50 to 1000V

Forward Current: 1.0A

RoHS Device

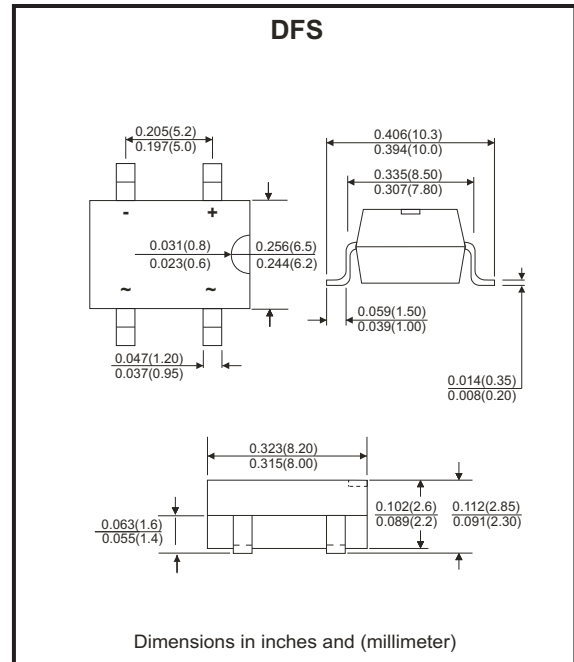


Features

- Rating to 1000V PRV.
- Ideal for printed circuit board.
- Low forward voltage drop.
- High current capability.
- The plastic material has UL flammability classification 94V-0
- UL recognized file # E349301 

Mechanical Data

- Polarity: As marked on Body.
- Weight: 0.38 grams.
- Mounting position: Any.



Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Parameter	Symbol	DF 005S-G	DF 01S-G	DF 02S-G	DF 04S-G	DF 06S-G	DF 08S-G	DF 10S-G	Unit
Maximum Recurrent 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 Average Forward Rectified Current @ $T_A=40^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Super Imposed On Rated Load (JEDEC Method)	I_{FSM}	30							A
Maximum Forward Voltage at 1.0A DC	V_F	1.1							V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ At Rate DC Blocking Voltage @ $T_J=125^\circ\text{C}$	I_R	10 500							μA
I^2T Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	3.735							A^2s
Typical Junction Capacitance Per Element (Note 1)	C_J	25							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	40							$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Thermal resistance from junction to ambient mounted on P.C.B with 0.5*0.5"(13*13mm) copper pads.

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REV: G

SMD Glass Passivated Bridge Rectifiers



Rating and Characteristics Curves (DF005S-G Thru. DF10S-G)

Fig.1 - Forward Current Derating Curve

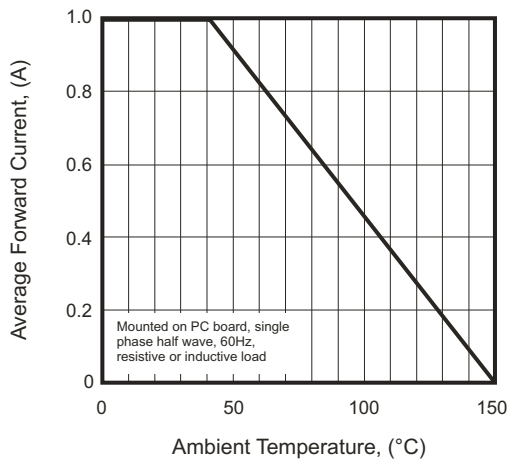


Fig.2 - Maximum Non-repetitive Surge Current

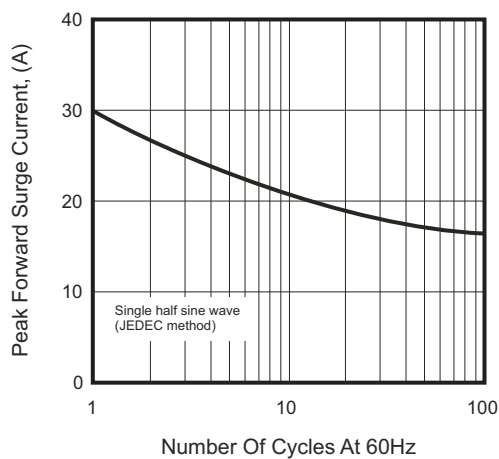


Fig.3 - Typical Junction Capacitance

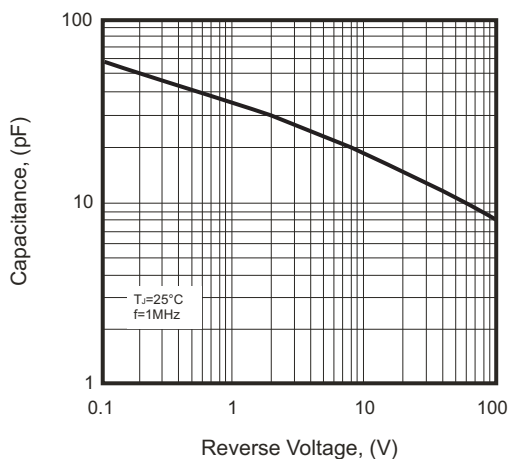


Fig.4 - Typical Forward Characteristics

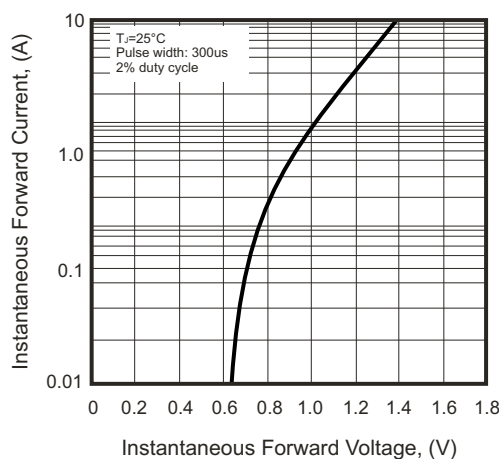
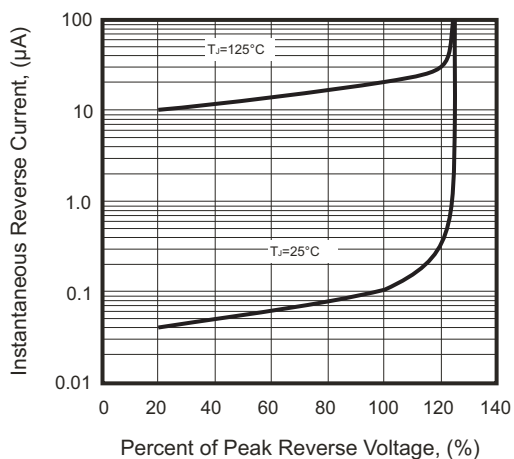


Fig.5 - Typical Reverse Characteristics



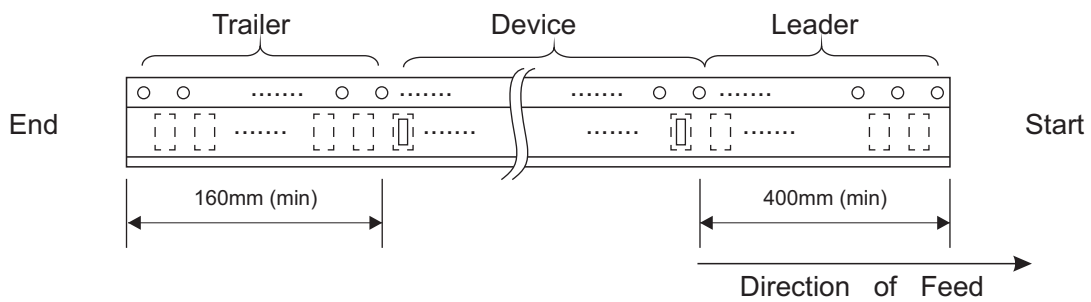
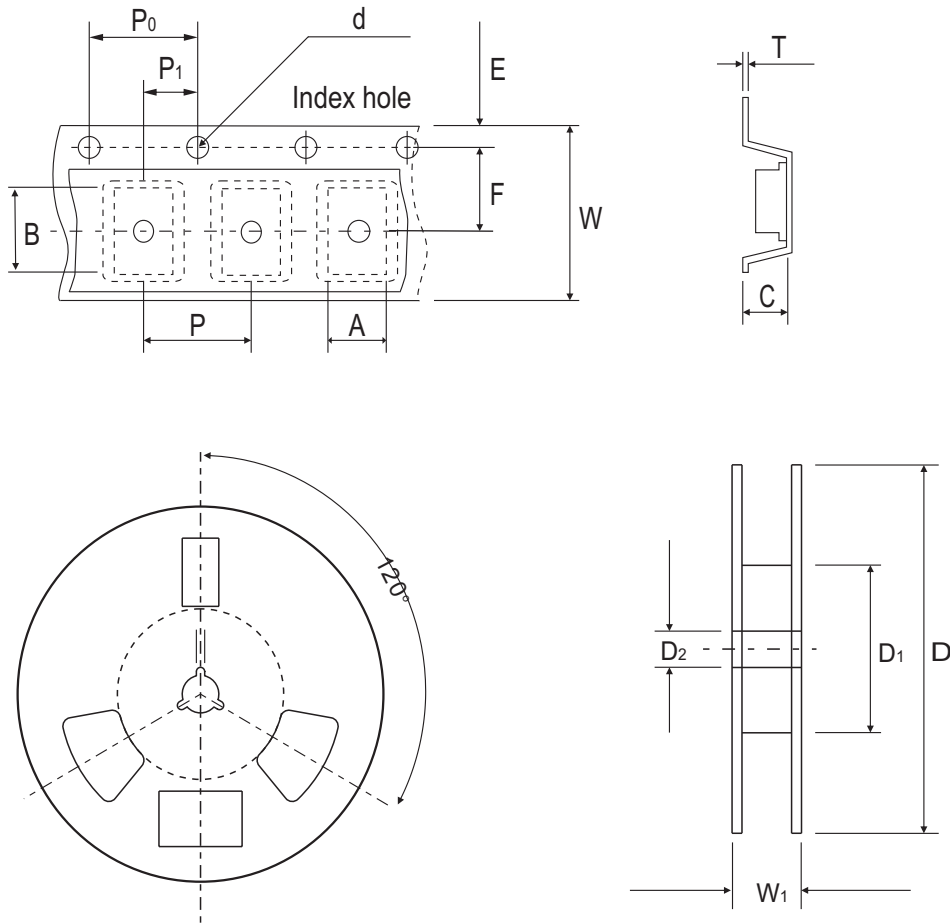
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Reel Taping Specification



DFS	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	8.64 ± 0.10	10.41 ± 0.10	3.81 ± 0.10	1.55 ± 0.05	330	50.0 MIN.	13.00 ± 0.20
	(inch)	0.340 ± 0.004	0.409 ± 0.004	0.150 ± 0.004	0.061 ± 0.002	13	1.969 MIN.	0.512 ± 0.008

DFS	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	7.50 ± 0.05	12.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.32	16.00 ± 0.30	16.00~18.40
	(inch)	0.069 ± 0.004	0.295 ± 0.002	0.472 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.013	0.630 ± 0.012	0.630~0.724

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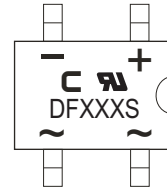
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SMD Glass Passivated Bridge Rectifiers



Marking Code

Part Number	Marking code	Packaging
DF005SP-G	DF005S	Tube
DF01SP-G	DF01S	Tube
DF02SP-G	DF02S	Tube
DF04SP-G	DF04S	Tube
DF06SP-G	DF06S	Tube
DF08SP-G	DF08S	Tube
DF10SP-G	DF10S	Tube
DF005ST-G	DF005S	Reel
DF01ST-G	DF01S	Reel
DF02ST-G	DF02S	Reel
DF04ST-G	DF04S	Reel
DF06ST-G	DF06S	Reel
DF08ST-G	DF08S	Reel
DF10ST-G	DF10S	Reel



XX / XXX = Product type marking code
C = Comchip Logo

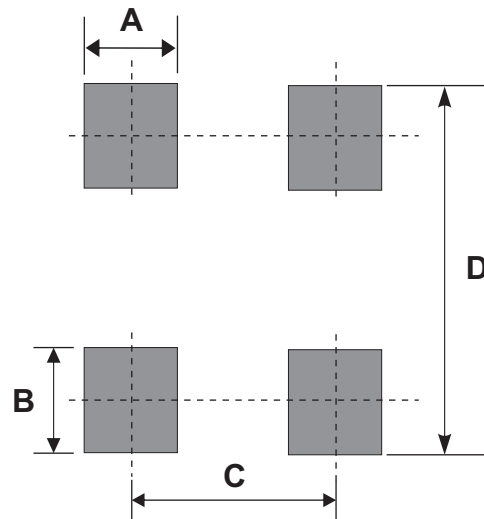
Note:

1) Suffix code after part number to specify packaging item .

Packaging	Code
TUBE PACK	P
REEL PACK	T

Suggested PAD Layout

SIZE	DFS	
	(mm)	(inch)
A	1.20 Min	0.047 Min
B	1.52 Min	0.060 Min
C	5.21 Ref	0.205 Ref
D	10.26 Max	0.404 Max



Standard Packaging

Case Type	TUBE PACK	
	TUBE (pcs)	BOX (pcs)
DFS	50	5,000

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DFS	1,000	13

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REV: G

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