

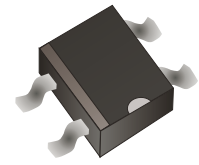
## DF005S-HF Thru. DF10S-HF

Reverse Voltage: 50 to 1000V

Forward Current: 1.0A

RoHS Device

Halogen Free

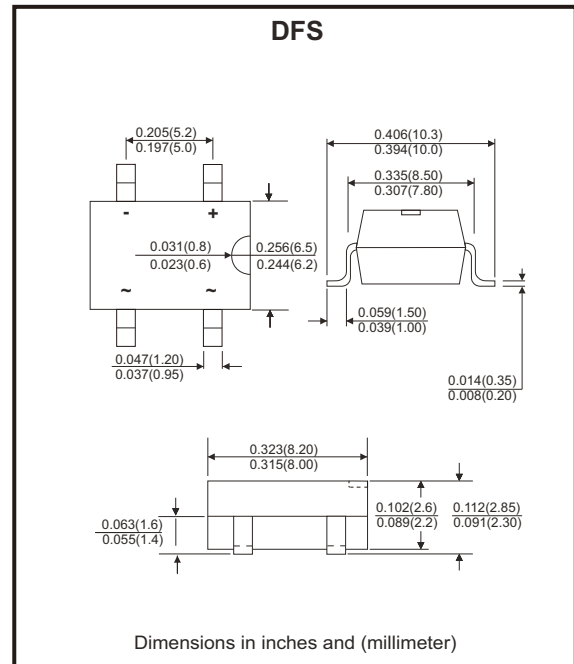


### Features

- 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 (approx.).
- 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-HF	DF 01S-HF	DF 02S-HF	DF 04S-HF	DF 06S-HF	DF 08S-HF	DF 10S-HF	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 @ $T_A=40^\circ C$	$I_{(AV)}$	1.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed 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 @ $T_J=25^\circ C$ at rate DC blocking voltage @ $T_J=125^\circ C$	$I_R$	10 500							$\mu A$
$I^2 T$ rating for fusing ( $t < 8.3ms$ )	$I^2 t$	3.735							$A^2 s$
Typical junction capacitance per element (Note 1)	$C_J$	25							pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	40							$^\circ C/W$
Operating temperature range	$T_J$	-55 to +150							$^\circ C$
Storage temperature range	$T_{STG}$	-55 to +150							$^\circ C$

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.

## Rating and Characteristics Curves (DF005S-HF Thru. DF10S-HF)

Fig.1 - Forward Current Derating Curve

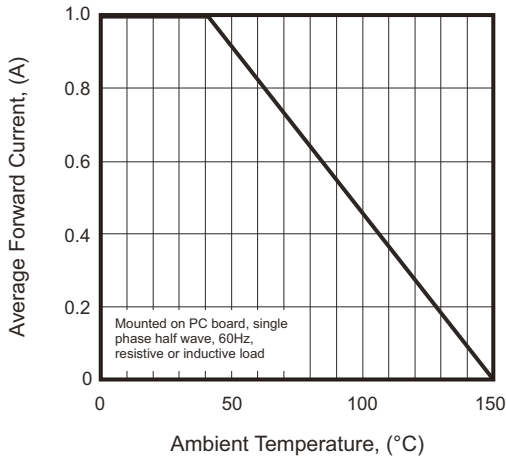


Fig.2 - Maximum Non-repetitive Surge Current

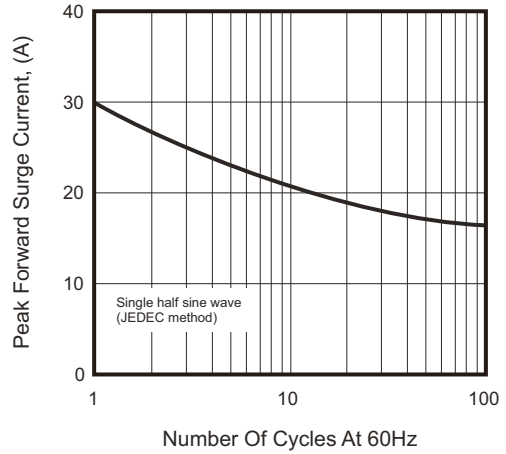


Fig.3 - Typical Junction Capacitance

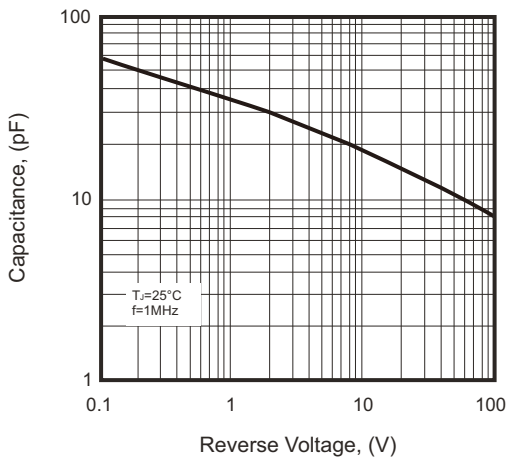


Fig.4 - Typical Forward Characteristics

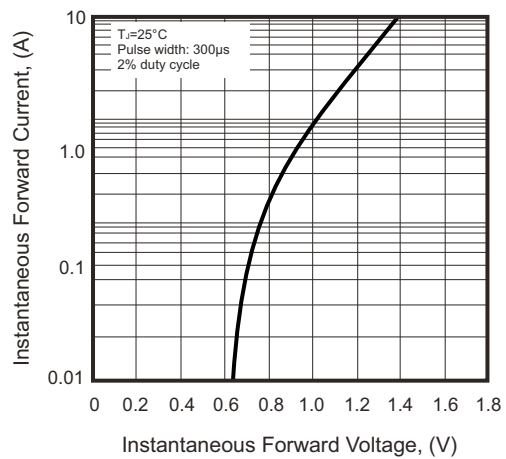
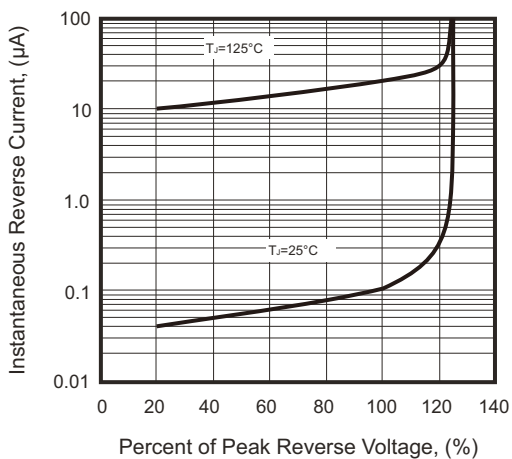
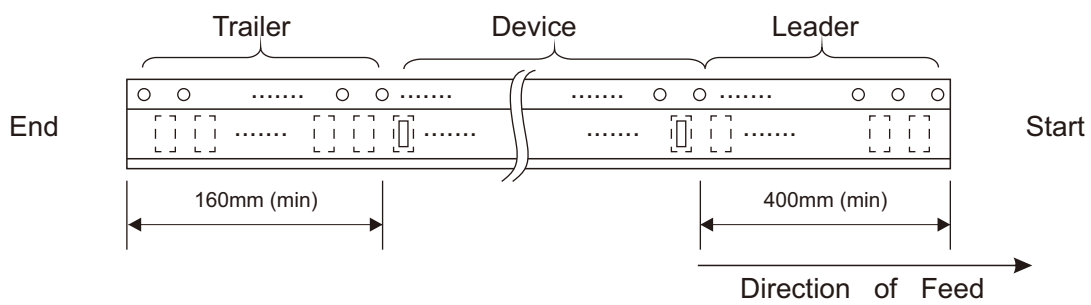
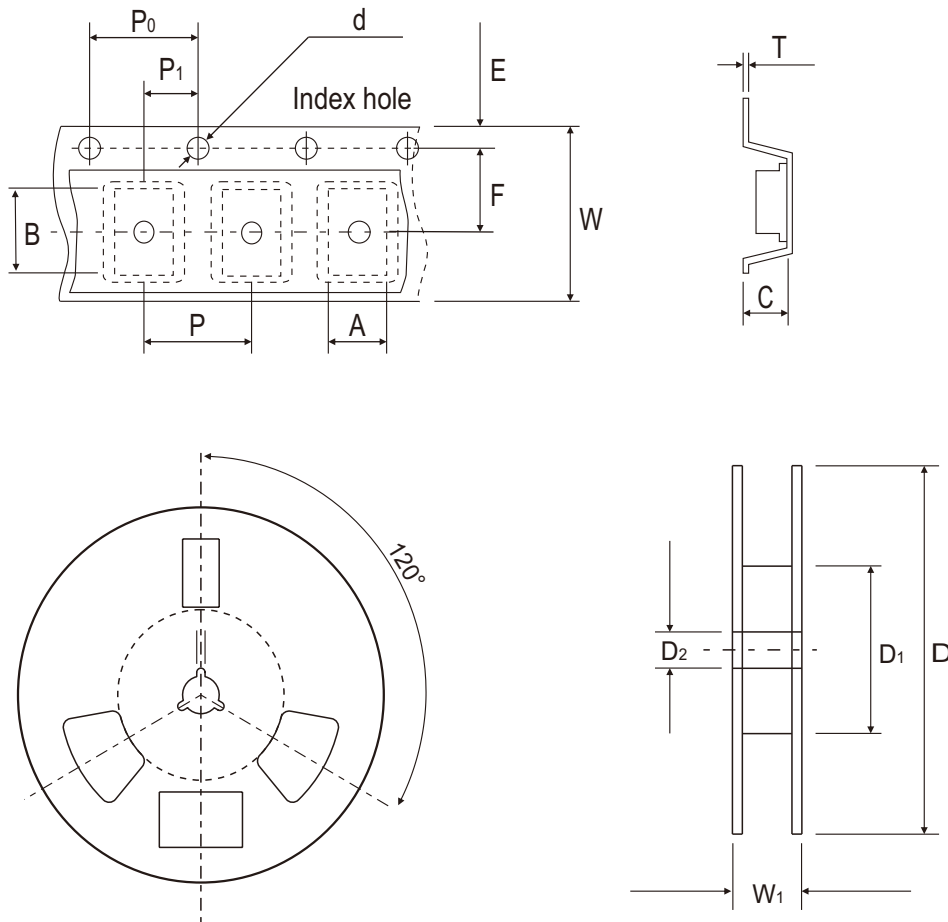


Fig.5 - Typical Reverse Characteristics



## Reel Taping Specification

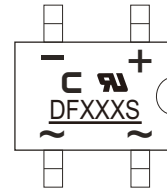


DFS	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	8.64 ± 0.10	10.41 ± 0.10	3.81 ± 0.10	1.55 ± 0.05	330	50.0 MIN.	13.00 ± 0.20
	(inch)	0.340 ± 0.004	0.409 ± 0.004	0.150 ± 0.004	0.061 ± 0.002	13	1.969 MIN.	0.512 ± 0.008

DFS	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(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

## Marking Code

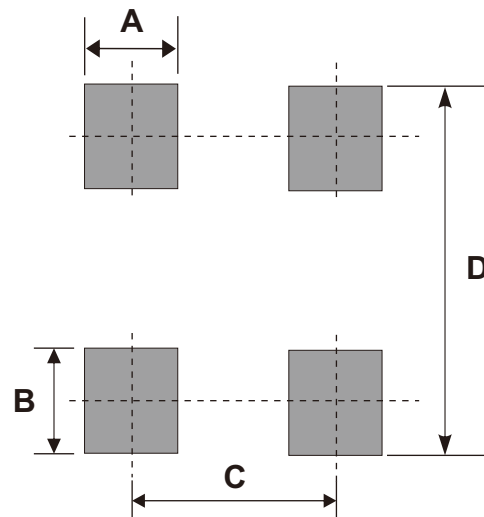
Part Number	Marking code
DF005S-HF	DF005S
DF01S-HF	DF01S
DF02S-HF	DF02S
DF04S-HF	DF04S
DF06S-HF	DF06S
DF08S-HF	DF08S
DF10S-HF	DF10S



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

## Suggested P.C.B. 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	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
DFS	1,000	13