

## CDSQR4448-HF

RoHS Device  
Halogen Free



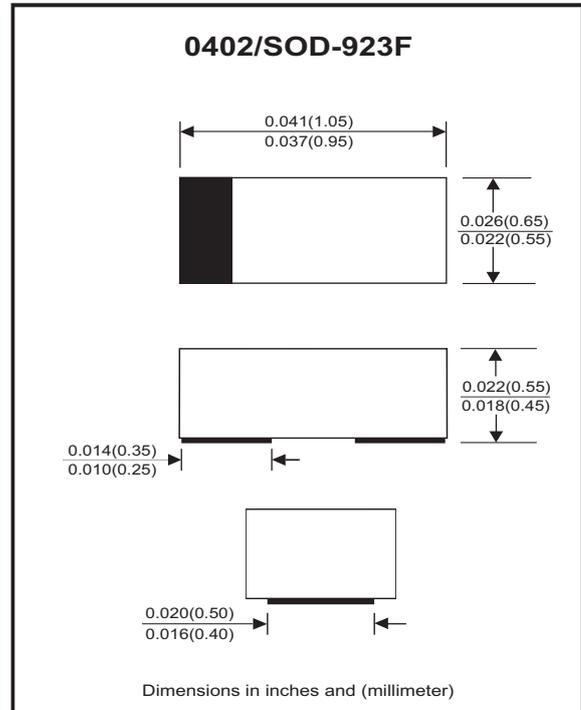
### Features

- High Speed.
- Fast Switching Speed.
- Designed for mounting on small surface.
- Extremely thin/leadless package.

### Mechanical data

- Case: 0402/SOD-923F standard package, molded plastic.
- Terminals: Gold plated, Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.
- Weight: 0.001 grams (approx.).

### Circuit diagram



### Maximum Rating (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Repetitive peak reverse voltage		$V_{RRM}$			100	V
Reverse voltage		$V_R$			80	V
Average forward current		$I_o$			125	mA
Forward current, surge peak	$T_p=1\mu\text{s}$ $T_p=8.3\text{mS}$	$I_{FSM}$			2 1	A
Power dissipation		$P_D$			125	mW
Operating temperature range		$T_j$	-40		+125	$^\circ\text{C}$
Storage temperature range		$T_{STG}$	-40		+125	$^\circ\text{C}$

### Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 5\text{ mA}$ $I_F = 100\text{ mA}$	$V_F$	0.62		0.72 1	V
Reverse current	$V_R = 20\text{ V}$ $V_R = 80\text{ V}$	$I_R$			25 100	nA
Capacitance between terminals	$f = 1\text{ MHz}$ , and 0.5 VDC reverse voltage	$C_T$			9	pF
Reverse recovery time	$I_F = I_R = 10\text{ mA}$ , $I_{rr} = 0.1 \times I_R$ , $R_L = 100\text{ ohm}$	$T_{rr}$			9	nS

## RATING AND CHARACTERISTIC CURVES (CDSQR4448-HF)

Fig.1 - Forward Characteristics

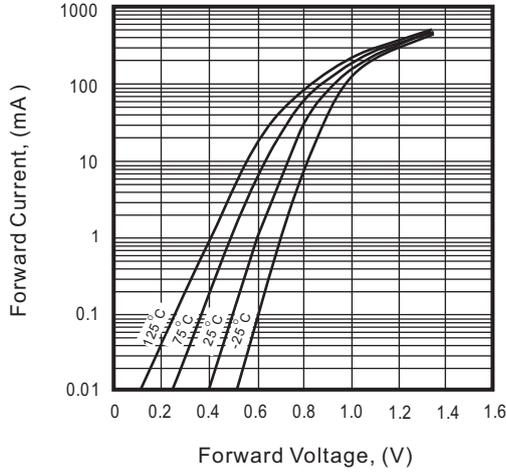


Fig.2 - Reverse Characteristics

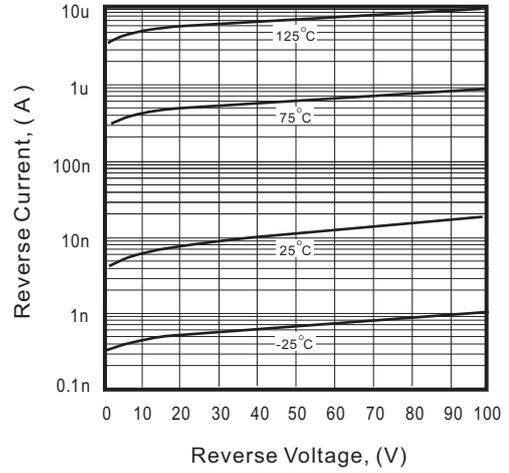


Fig.3 - Capacitance Between Terminals Characteristics

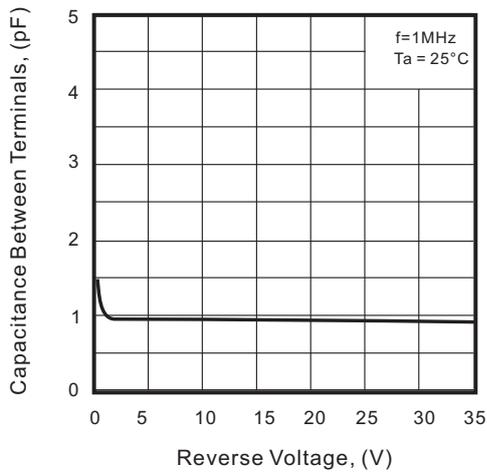
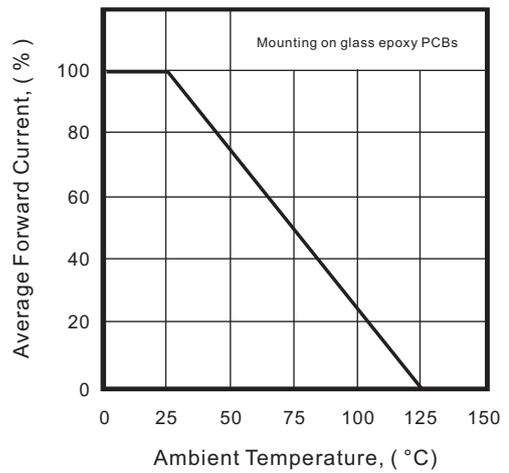
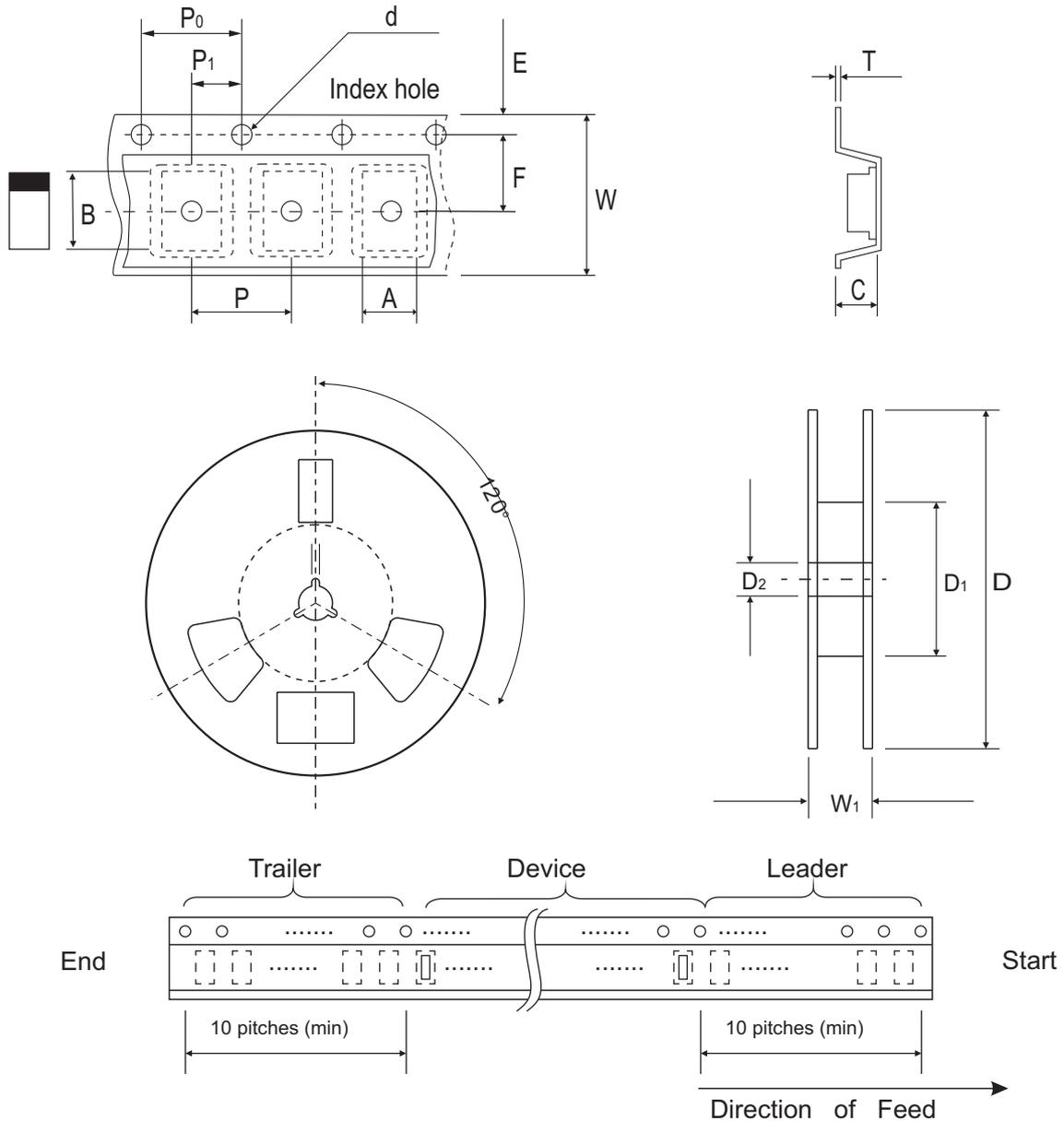


Fig.4 - Current Derating Curve



## Reel Taping Specification



0402 (SOD-923F)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	0.75 ± 0.10	1.15 ± 0.10	0.60 ± 0.10	1.55 ± 0.10	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.030 ± 0.004	0.045 ± 0.004	0.024 ± 0.004	0.061 ± 0.004	7.008 ± 0.040	2.362 MIN.	0.512 ± 0.008

0402 (SOD-923F)	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.22 ± 0.05	8.00 ± 0.20	13.5 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.002	0.315 ± 0.008	0.531 MAX.

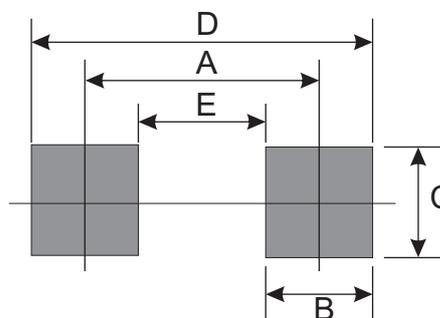
## Marking Code

Part Number	Marking Code
CDSQR4448-HF	S5



## Suggested PAD Layout

SIZE	0402/SOD-923F	
	(mm)	(inch)
A	0.75	0.030
B	0.50	0.020
C	0.70	0.028
D	1.25	0.049
E	0.25	0.010



## Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
0402/SOD-923F	5,000	7

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