

## CPDQ03C5V0AU-HF

**RoHS Device**  
**Halogen Free**



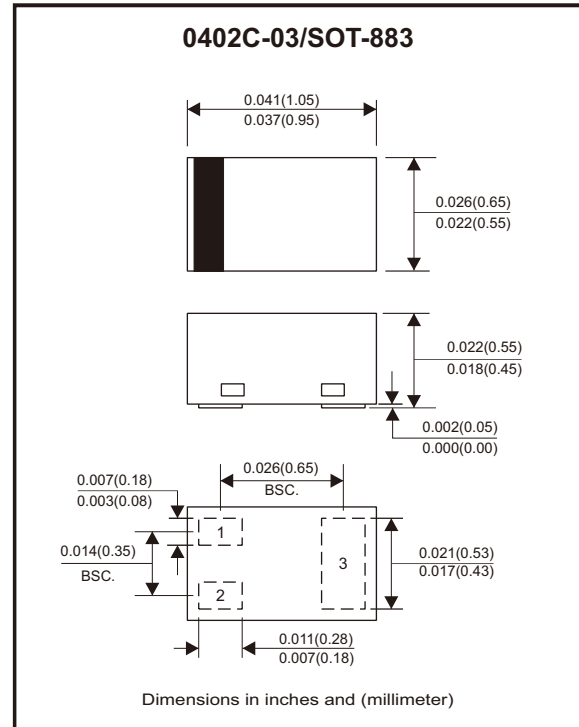
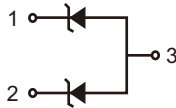
### Features

- Uni-directional ESD protection.
- Low leakage current.
- Low clamping voltage.

### Mechanical data

- Case: 0402C-03/SOT-883 package, molded plastic.
- Polarity: Color band denotes cathode end.
- Mounting position: Any.

### Circuit Diagram



### Maximum Rating (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	$T_P = 8/20\mu s$	$P_{PP}$	60	W
Peak pulse current	$T_P = 8/20\mu s$	$I_{PP}$	4	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	$\pm 18$	kV
Operating temperature range		$T_j$	-55 to +125	°C
Storage temperature range		$T_{STG}$	-55 to +150	°C

### Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		$V_{RWM}$			5	V
Forward voltage	$I_F = 15mA$	$V_F$			1.2	V
Breakdown voltage	$I_r = 1mA$	$V_{BR}$	6			V
Reverse leakage current	$V_{RWM} = 5V$	$I_R$			0.1	$\mu A$
Clamping voltage	$I_{PP} = 1A, T_P = 8/20\mu s$	$V_C$		9	11	V
	$I_{PP} = 4A, T_P = 8/20\mu s$	$V_C$			15	
Junction capacitance	$V_R = 0V, f = 1MHz$	$C_J$		0.45	0.6	pF

## Rating and Characteristic Curves (CPDQ03C5V0AU-HF)

Fig.1 - 8/20 $\mu$ s Peak Pulse Current Waveform Acc. IEC 61000-4-5

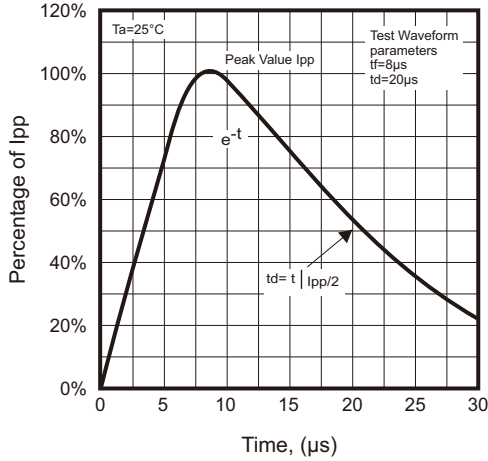


Fig.2 - Power Rating Derating Curve

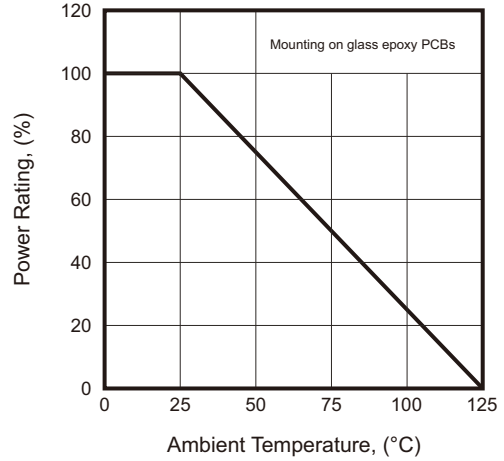


Fig.3 - Typical Clamping Voltage vs. Peak Pulse Current

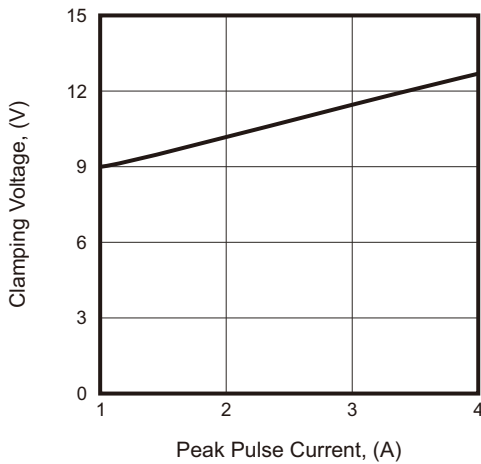


Fig.4 - Typical Capacitance Between Terminals Characteristics

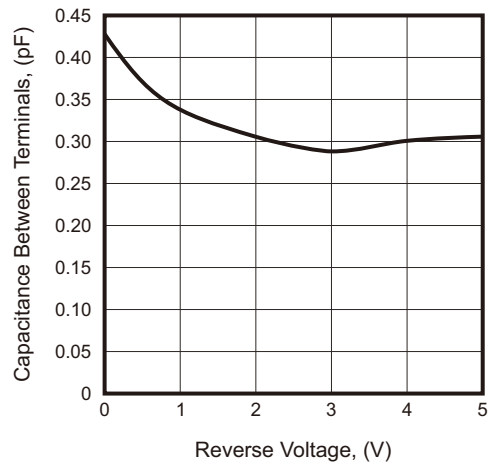
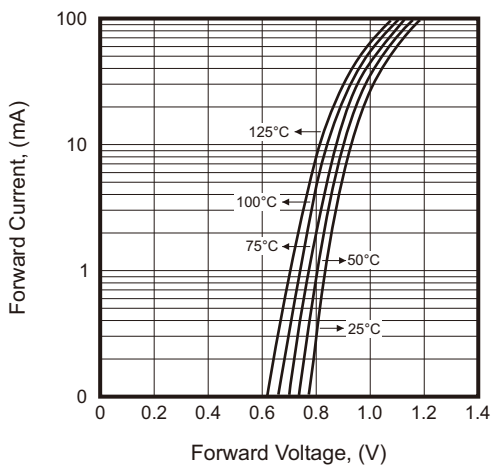
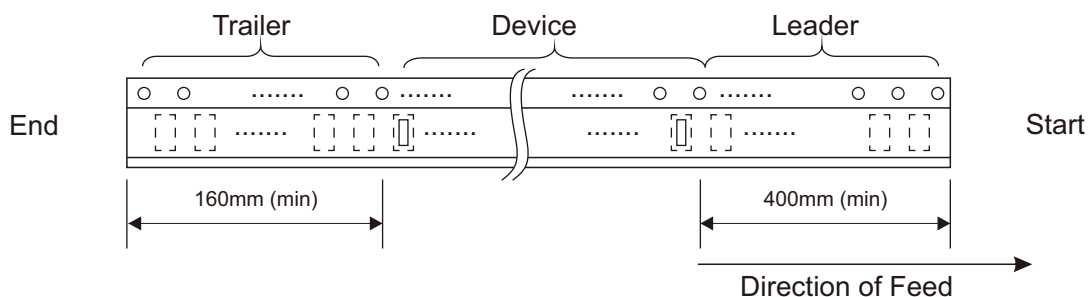
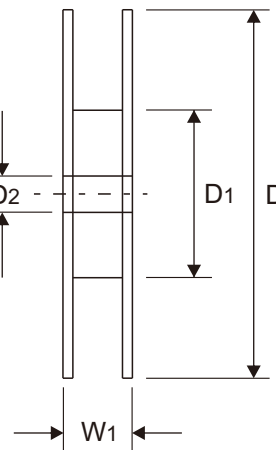
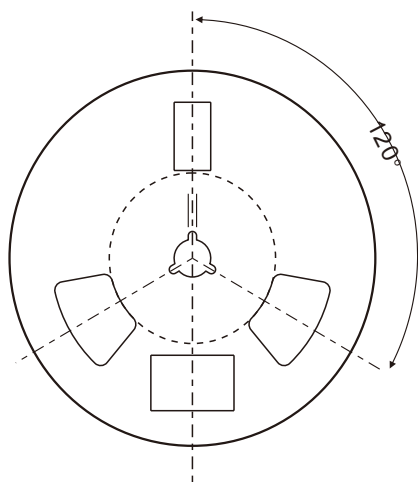
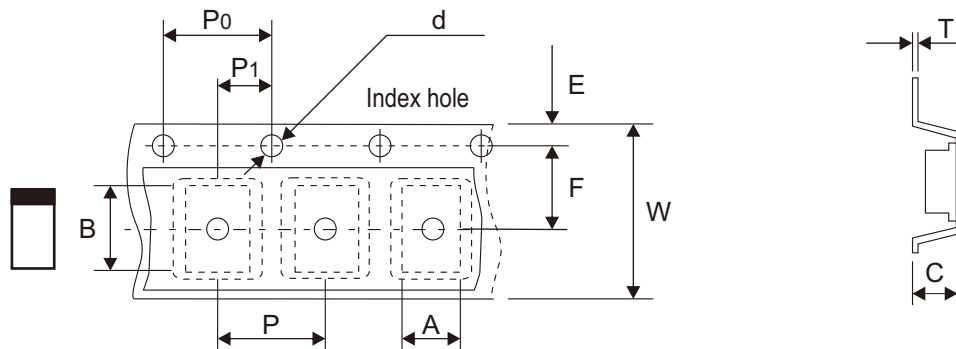


Fig.5 - Forward Characteristic



## Reel Taping Specification



0402C-03 (SOT-883)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.75 ± 0.05	1.17 ± 0.05	0.65 ± 0.05	1.50 + 0.10 - 0.00	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.030 ± 0.002	0.046 ± 0.002	0.026 ± 0.002	0.059 + 0.004 - 0.000	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0402C-03 (SOT-883)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.20 + 0.02 - 0.05	8.00 ± 0.20	12.00 + 0.50 - 0.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.008 + 0.001 - 0.002	0.315 ± 0.008	0.472 + 0.020 - 0.000

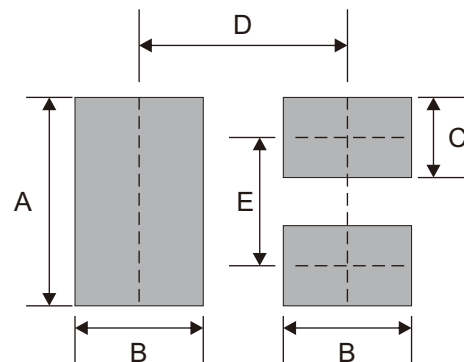
## Marking Code

Part Number	Marking Code
CPDQ03C5V0AU-HF	E5A



## Suggested P.C.B. PAD Layout

SIZE	0402C-03 (SOT-883)	
	(mm)	(inch)
A	0.65	0.026
B	0.40	0.016
C	0.25	0.010
D	0.65	0.026
E	0.40	0.016



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
0402C-03 (SOT-883)	5,000	7