

CPDUC24VE-HF

RoHS Device
Halogen Free



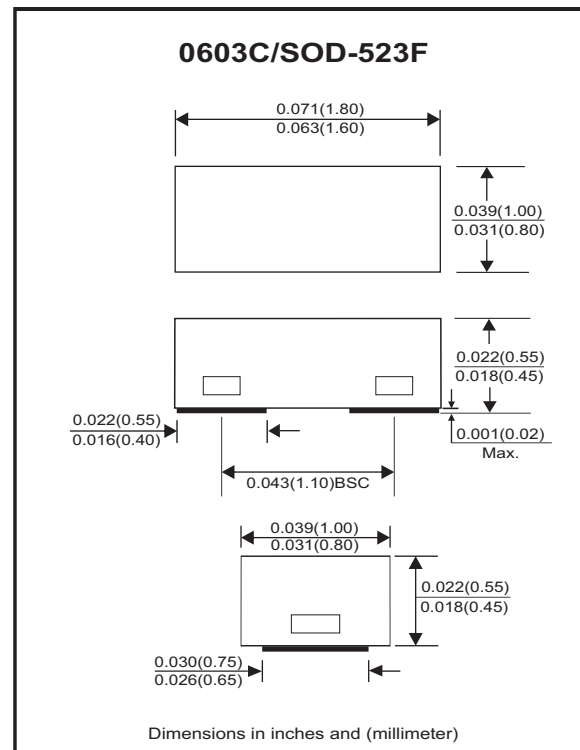
Features

- Bi-directional ESD protection.
- Surface mount package.
- Ultra small SMD package: 0603C
- High component density.

Mechanical data

- Case: 0603C/SOD-523F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- Weight: 0.003 grams(approx.).

Circuit Diagram



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

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	$T_P = 8/20\mu\text{s}$	P_{PP}	110	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	I_{PP}	2.5	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 25	kV
Operation temperature range		T_J	$-55\sim+125$	$^\circ\text{C}$
Storage temperature range		T_{STG}	$-55\sim+150$	$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		V_{RWM}			24	V
Breakdown voltage	$I_T = 1\text{mA}$	V_{BR}	26.5	28	32	V
Reverse leakage current	$V_{RWM} = 24\text{V}$	I_R			100	nA
Clamping voltage	$I_{PP} = 1\text{A}$, $T_P = 8/20\mu\text{s}$ $I_{PP} = 2.5\text{A}$, $T_P = 8/20\mu\text{s}$	V_C			36 44	V
Junction capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_J		16	25	pF

RATING AND CHARACTERISTIC CURVES (CPDUC24VE-HF)

Fig.1 - 8/20us Peak Pulse Current
Wave Form ACC. IEC 61000-4-5

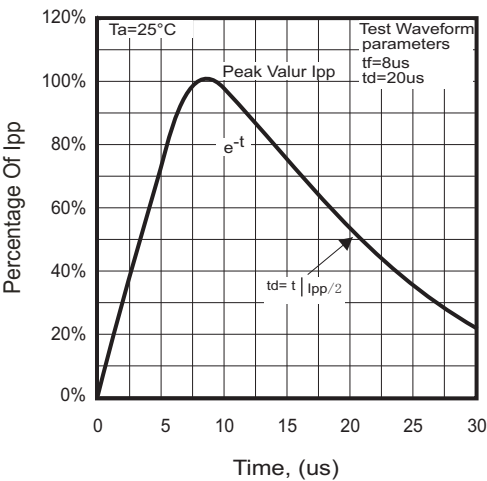


Fig.2 - Power rating derating curve

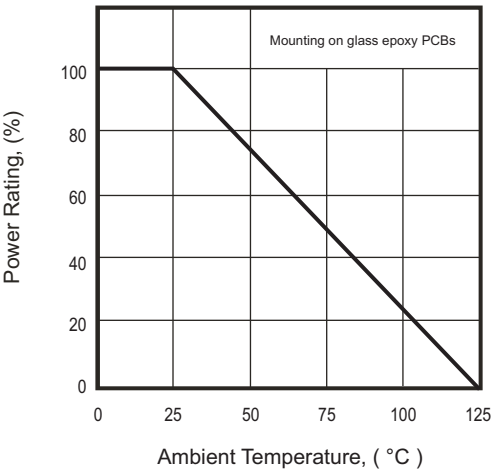


Fig. 3 - Clamping Voltage Vs.
Peak Pulse Current

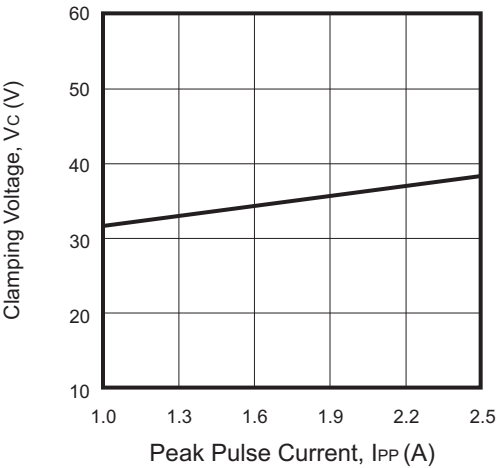
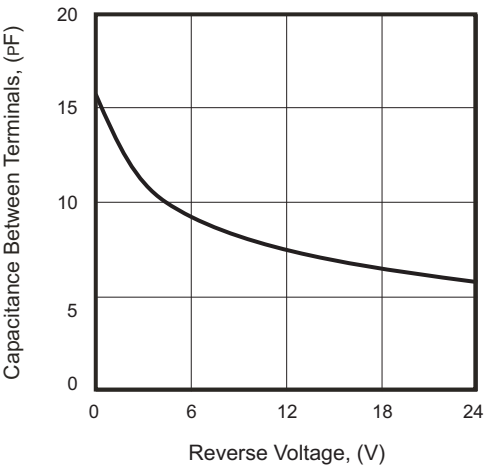
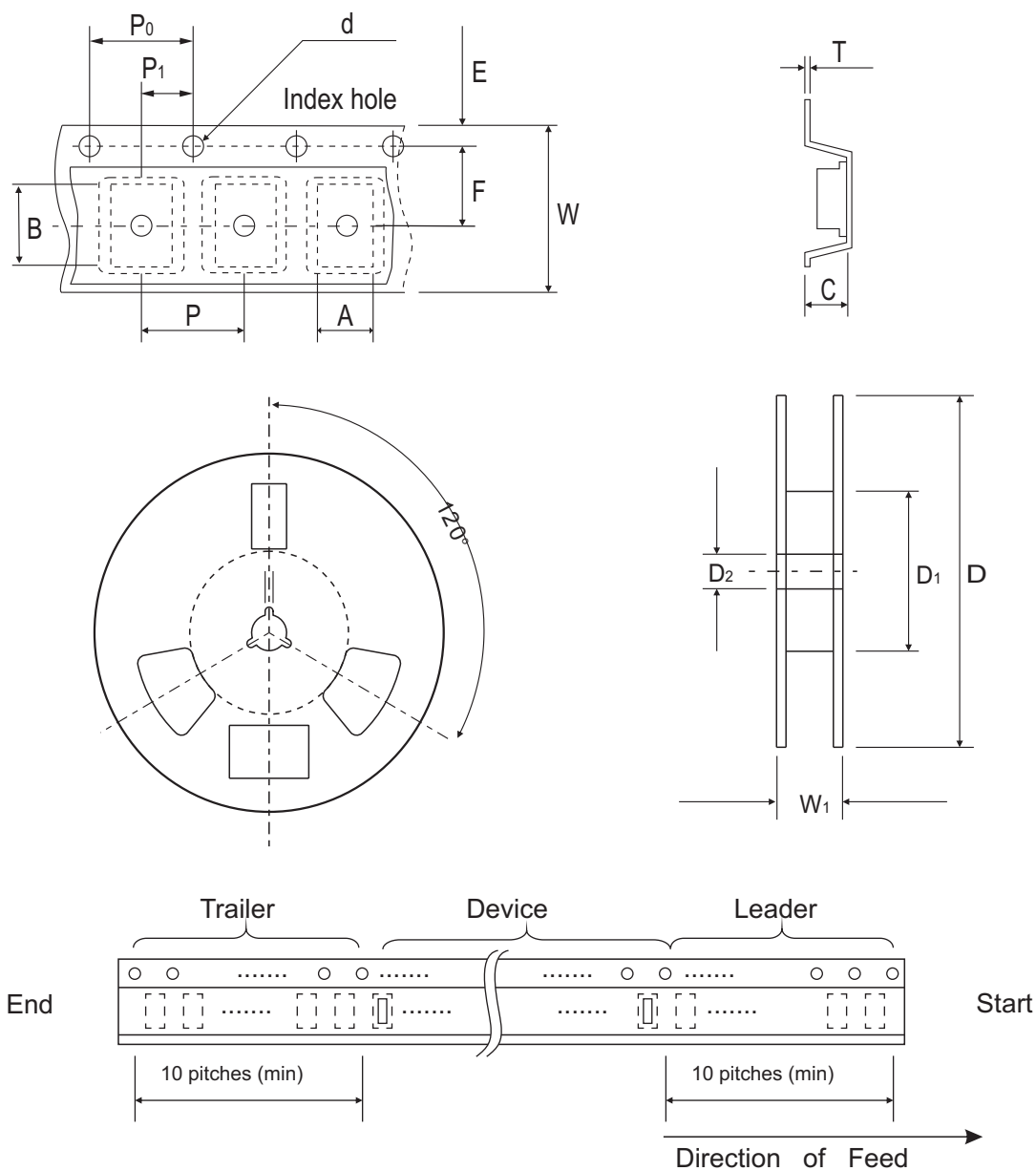


Fig.3 - Capacitance Between
Terminals Characteristics



Reel Taping Specification



0603C/ SOD-523F	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.00 ± 0.10	1.85 ± 0.10	1.00 ± 0.10	1.55 ± 0.10	178 ± 1.00	60.0 MIN.	13.0 ± 0.20
	(inch)	0.039 ± 0.004	0.073 ± 0.004	0.039 ± 0.004	0.061 ± 0.004	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

0603C/ SOD-523F	SYMBOL	E	F	P	P ₀	P ₁	T	W	W
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.05	8.00 ± 0.20	13.50 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.

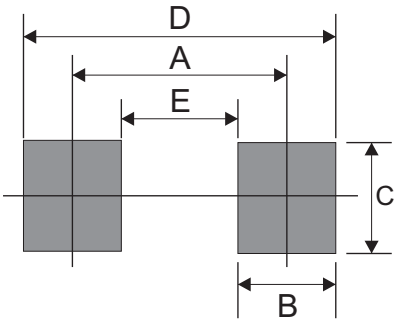
Marking Code

Part Number	Marking Code
CPDUC24VE-HF	E24



Suggested PAD Layout

SIZE	0603C/SOD-523F	
	(mm)	(inch)
A	1.10	0.043
B	0.70	0.028
C	1.00	0.039
D	1.80	0.071
E	0.40	0.016



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
0603C/SOD-523F	4,000	7