

ACPDUC24VE-HF High-Reliability and High-Performance

RoHS Device
Halogen Free



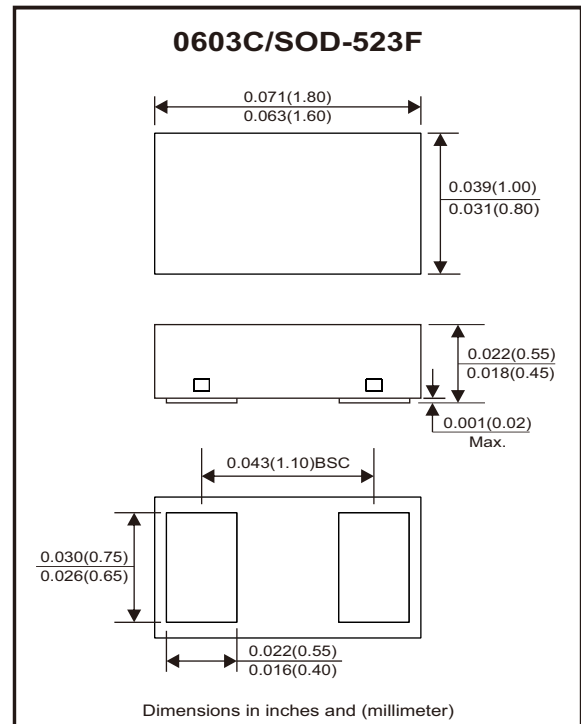
Features

- Bi-directional ESD protection.
- Surface mount package.
- Ultra small SMD package.
- High component density.
- AEC-Q101 Qualified.

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 TA=25°C unless otherwise noted)

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

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

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

Rating and Characteristic Curves (ACPDUC24VE-HF)

Fig.1 - 8/20 μ s Peak Pulse Current Waveform ACC. IEC 61000-4-5

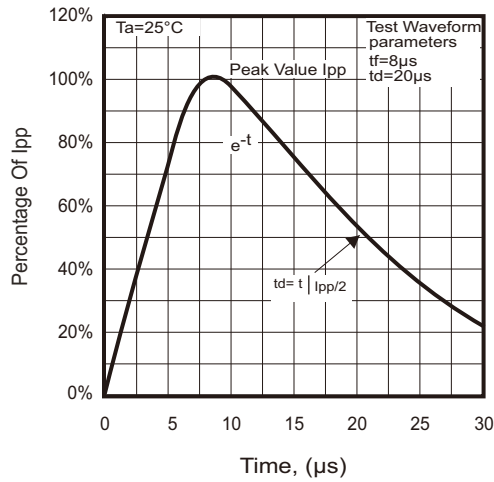


Fig.2 - Power Rating Derating Curve

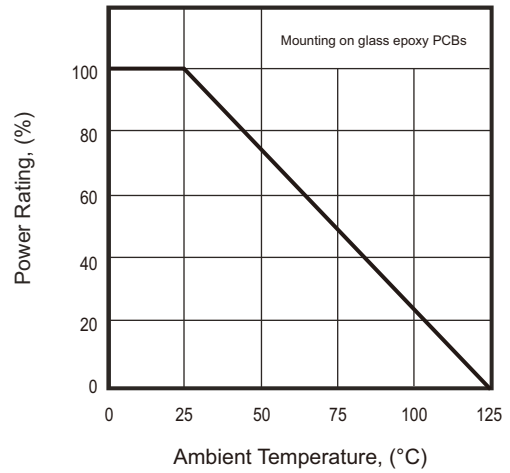


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

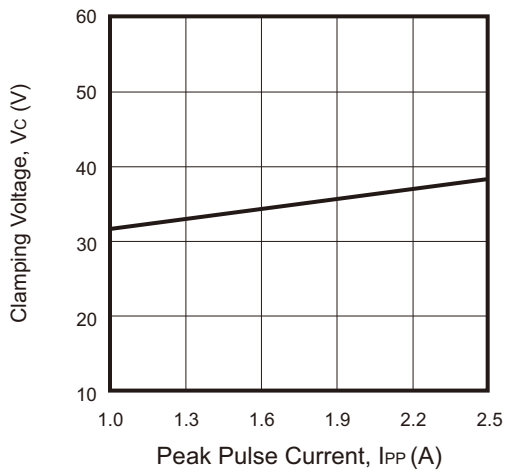
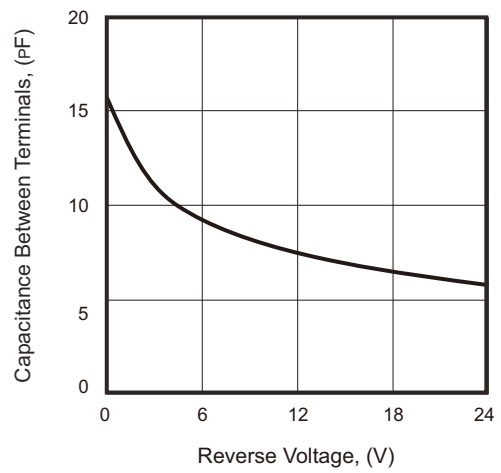
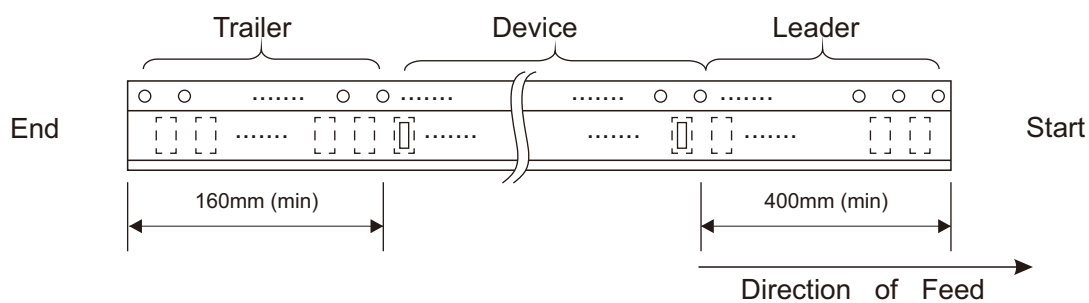
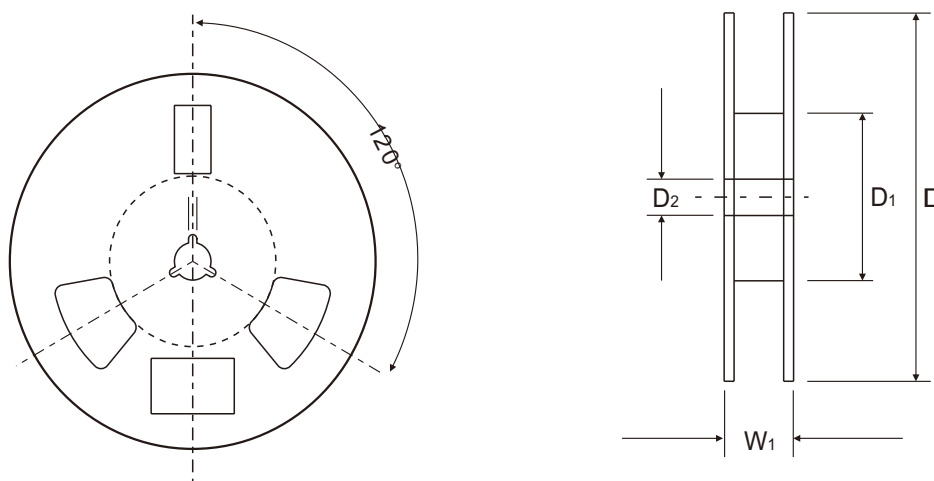
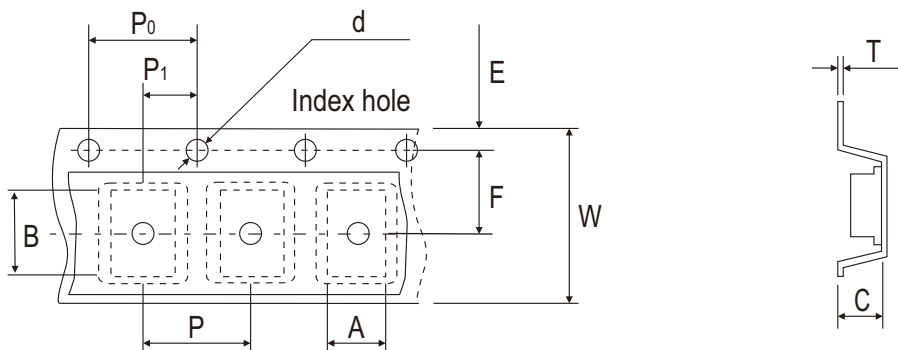


Fig.4 - Capacitance Between Terminals Characteristics



Reel Taping Specification



0603C/ SOD-523F	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.05 ± 0.05	1.96 ± 0.05	0.57 ± 0.05	1.50 + 0.10	178 ± 1.00	60.0 ± 0.50	13.50 ± 0.20
	(inch)	0.041 ± 0.002	0.077 ± 0.002	0.022 ± 0.0042	0.059 + 0.004	7.008 ± 0.04	2.362 ± 0.020	0.531 ± 0.008

0603C/ SOD-523F	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.05	2.00 ± 0.05	0.20 ± 0.03	8.00 ± 0.20	12.00 + 0.50 - 0
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.002	0.079 ± 0.002	0.008 ± 0.001	0.315 ± 0.008	0.472 + 0.020 - 0

Company reserves the right to improve product design, functions and reliability without notice.

REV:B

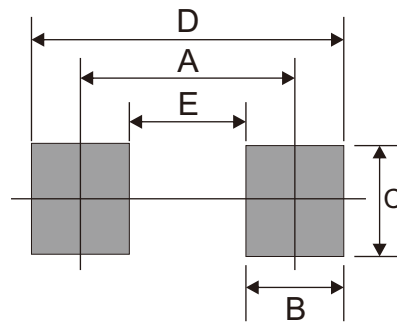
Marking Code

Part Number	Marking Code
ACPDUC24VE-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