

ACPDUC5V0U-HF

RoHS Device

Halogen Free



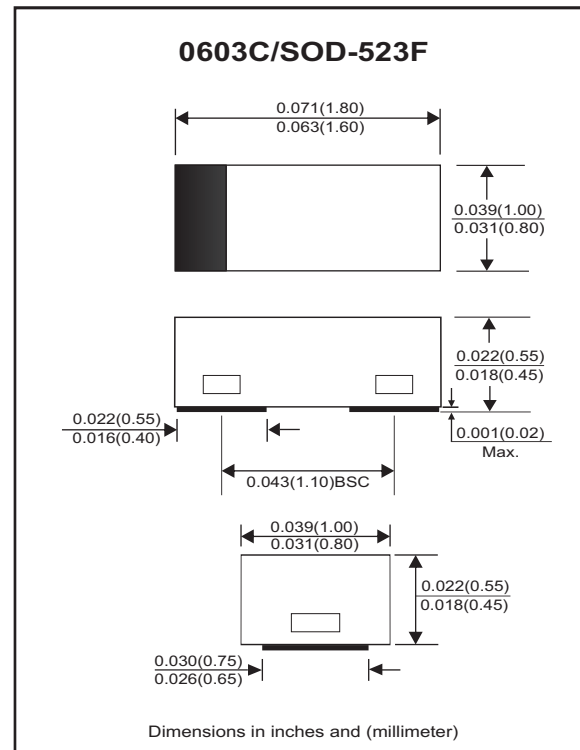
Features

- Uni-directional ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Surface mount package.
- Ultra small SMD package:0603.
- High component density.
- Comply with AEC-Q101

Mechanical data

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

Circuit diagram



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 10\text{mA}$	V_F		0.8		V
Diode breakdown voltage	$I_R = 1\text{mA}$	V_{BD}	6			V
Leakage current	$V_R = 5\text{V}$	I_L		0.3	2.0	μA
Junction capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_T		90	120	pF
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			20 15	kV
Clamping voltage	$I_{PP} = 5\text{A}, T_P = 8/20\mu\text{s}$ $I_{PP} = 16\text{A}, T_P = 8/20\mu\text{s}$	V_C			9.8 12.5	V
Peak pulse power		P_{PP}			200	W
Operation temperature		T_J	-55		125	°C
Storage temperature		T_{STG}	-55		150	°C

RATING AND CHARACTERISTIC CURVES (ACPDUC5V0U-HF)

Fig.1 - 8/20us Peak Pulse Current
Waveform acc. IEC 61000-4-5

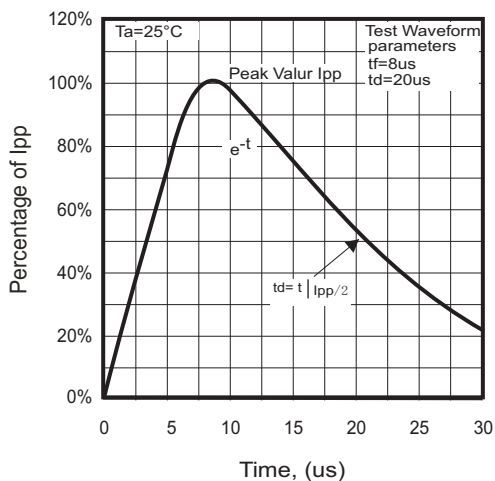


Fig.2 - Power Rating Derating Curve

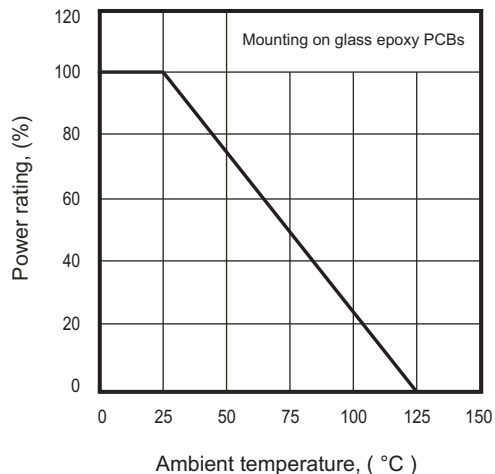


Fig.3 - Clamping Voltage vs.
Peak Pulse Current

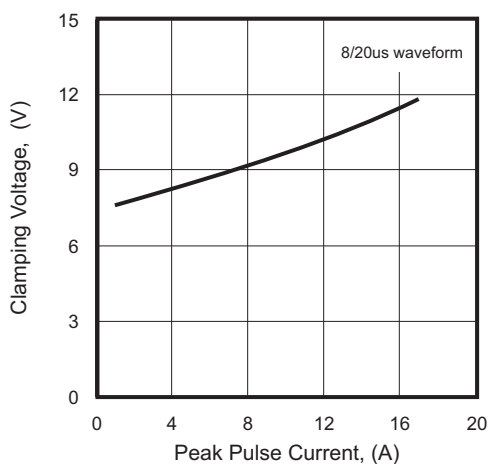


Fig. 4 - Forward Voltage vs.
Forward Current

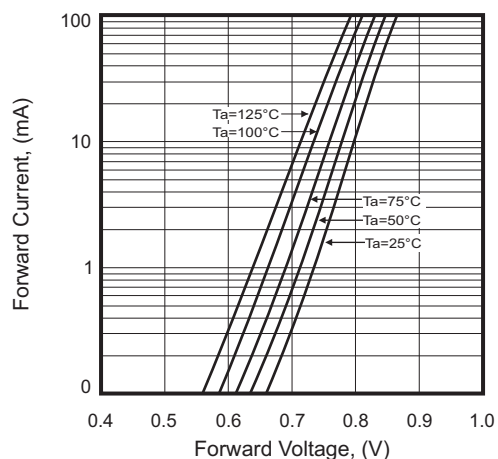
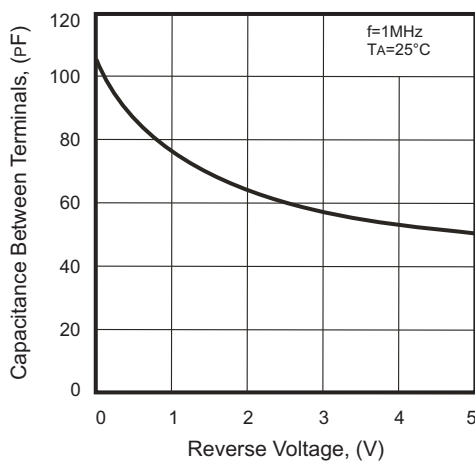
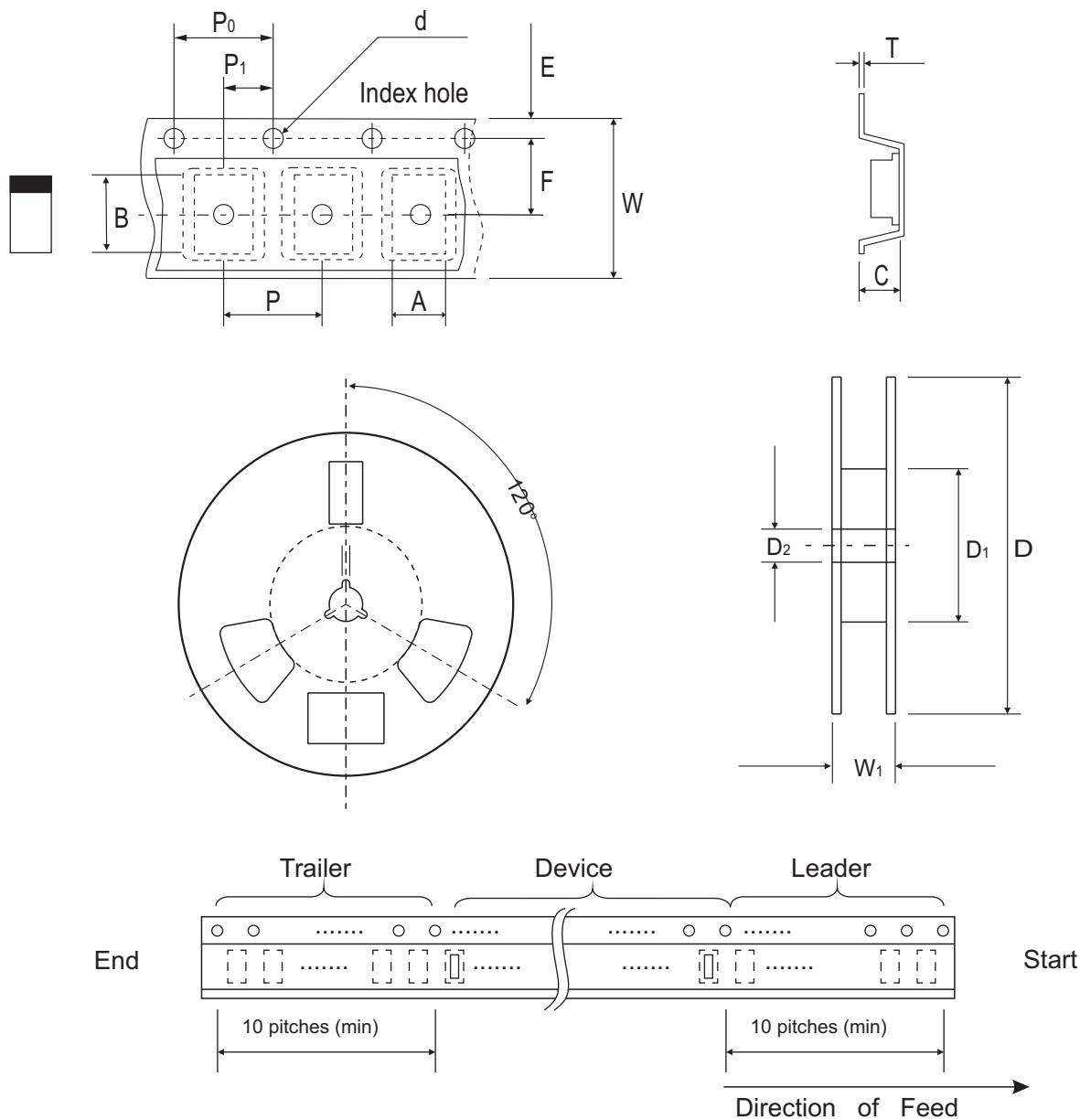


Fig. 5 - Capacitance Between
Terminals Characteristics



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.

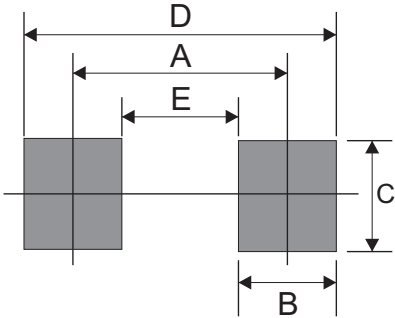
Marking Code

Part Number	Marking Code
ACPDUC5V0U-HF	E05



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

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