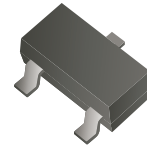


ACPDV3-24V-HF

RoHS Device

Halogen Free



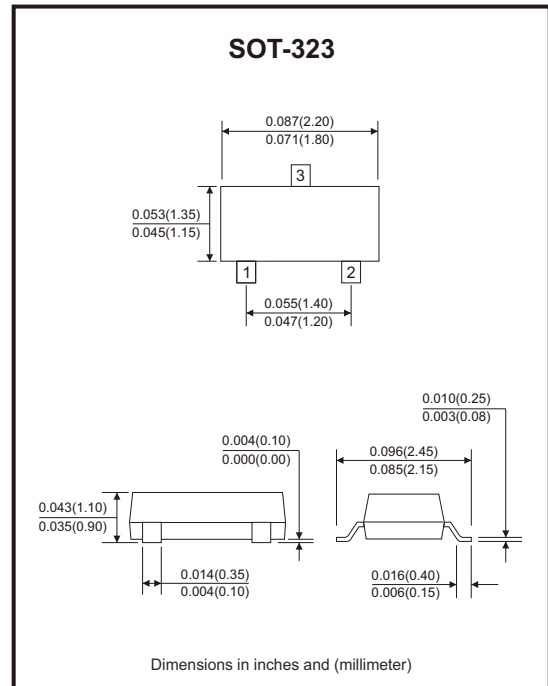
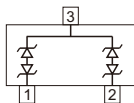
Features

- Protects two I/O lines.
- Low capacitance.
- Low leakage current.
- Response time is < 1ns.
- Low operating and clamping voltages.
- Solid-state silicon avalanche technology.
- IEC 61000-4-2(ESD) $\pm 30\text{kV}$ (air/contact).
- AEC-Q101 Qualified.

Mechanical data

- Case: SOT-323, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

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}	180	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	I_{PP}	3	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 30	kV
Lead soldering temperature (10 sec.)		T_L	260	$^\circ\text{C}$
Operating junction temperature range		T_J	-55 to +125	$^\circ\text{C}$
Storage temperature range		T_{STG}	-55 to +150	$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse working voltage		V_{RWM}			24	V
Reverse breakdown voltage	$I_T = 1\text{mA}$	V_{BR}	26.5			V
Reverse leakage current	$V_{RWM} = 24\text{V}$	I_R			10	nA
Clamping voltage	$I_{PP} = 1\text{A}$, $t_p = 8/20\mu\text{s}$	V_C		39	45	V
	$I_{PP} = 3\text{A}$, $t_p = 8/20\mu\text{s}$	V_C		48	60	
Junction capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_J		18	30	pF

Notes: Junction capacitance is measured in $V_R=0\text{V}$, $f=1\text{MHz}$.

Typical Rating and Characteristic Curves (ACPDV3-24V-HF)

Fig.1 - Pulse Waveform

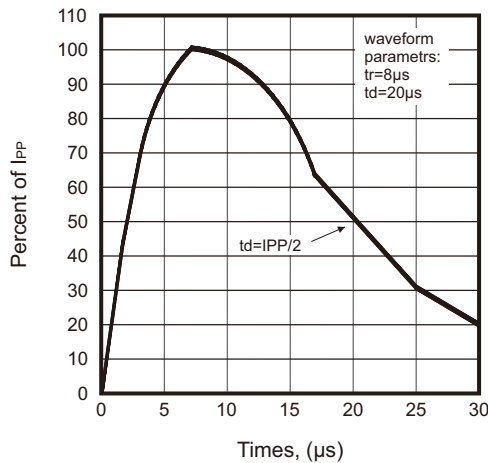


Fig.2 - Non-Repetitive Peak Power vs. Pulse Time

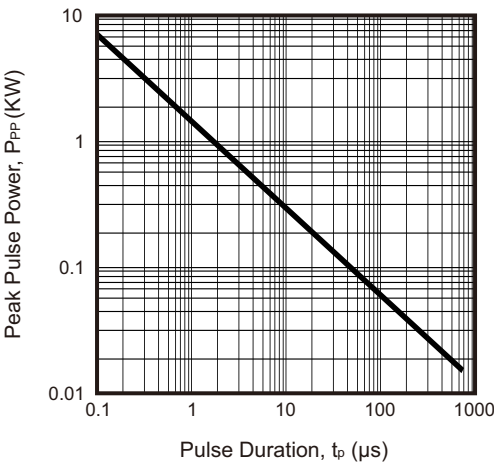


Fig.3 - Power Derating Curve

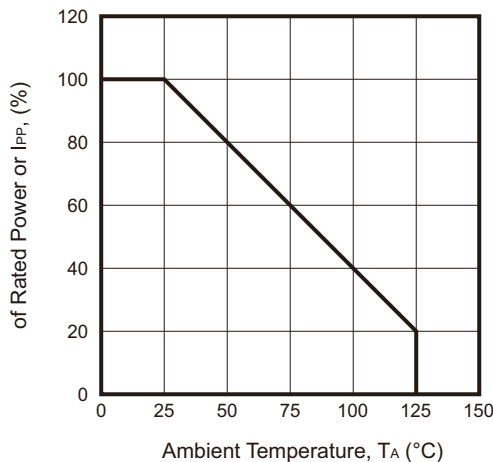
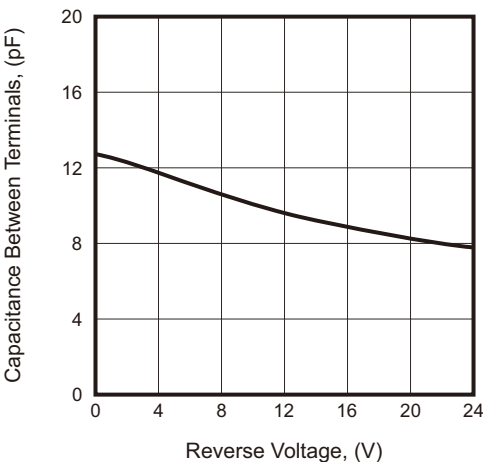
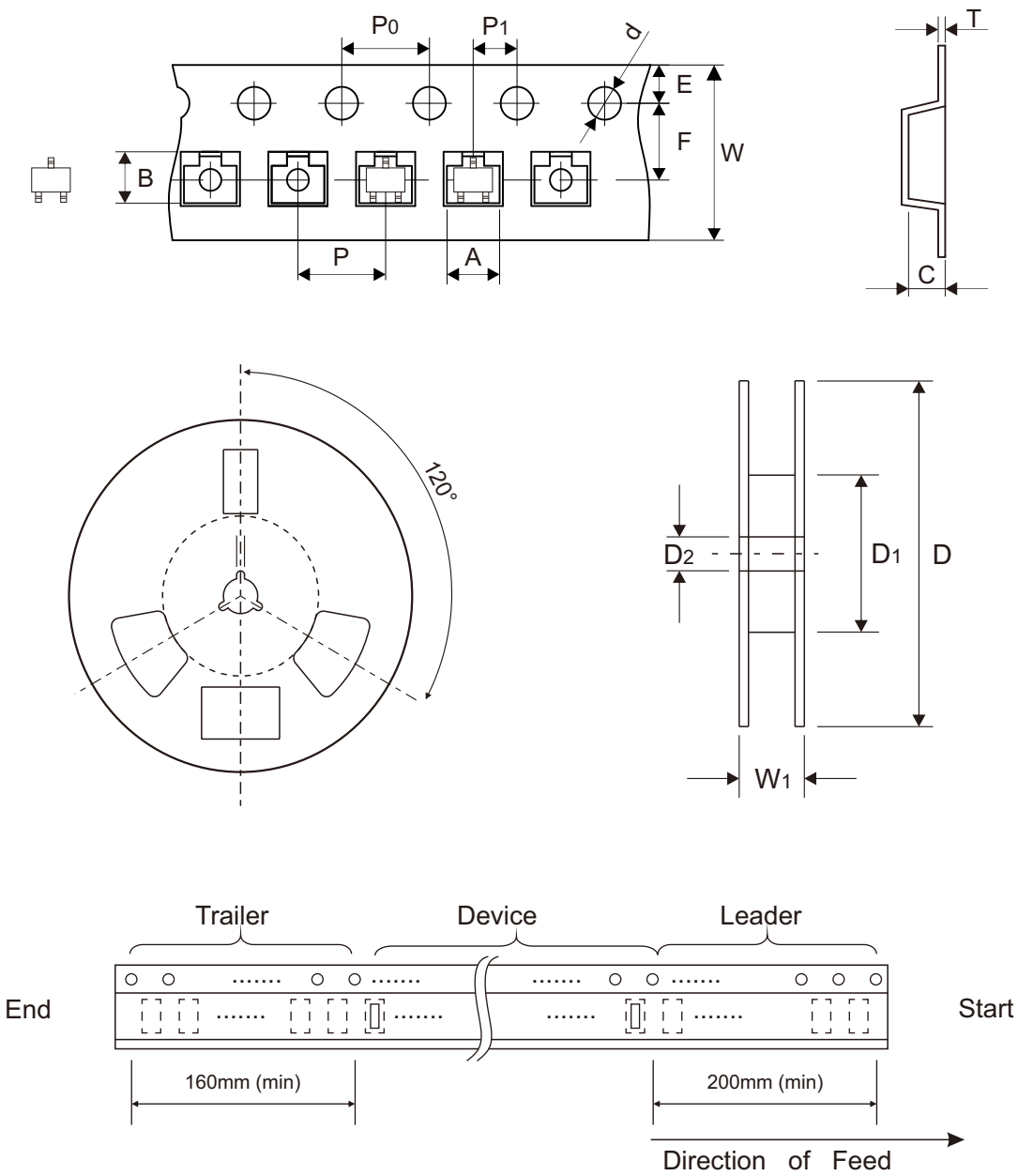


Fig.4 - Typical Capacitance Between Terminals Characteristics



Reel Taping Specification

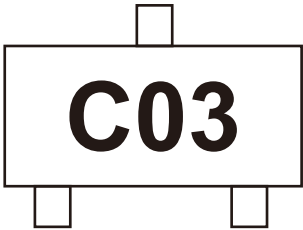


SOT-323	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.35 ± 0.10	2.55 ± 0.10	1.20 ± 0.10	1.50 ± 0.10	178.00 ± 1.00	55.00 ± 1.00	13.00 ± 1.00
	(inch)	0.093 ± 0.004	0.100 ± 0.004	0.047 ± 0.004	0.059 ± 0.004	7.008 ± 0.039	2.165 ± 0.039	0.512 ± 0.039

SOT-323	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	0.25 ± 0.05	8.00 ± 0.10	13.00 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.010 ± 0.002	0.315 ± 0.004	0.512 ± 0.039

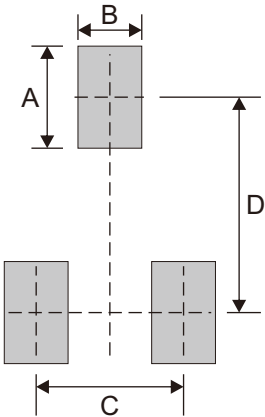
Marking Code

Part Number	Marking Code
ACPDV3-24V-HF	C03



Suggested P.C.B. PAD Layout

SIZE	SOT-323	
	(mm)	(inch)
A	0.80	0.031
B	0.50	0.020
C	1.30	0.051
D	2.20	0.087



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-323	3,000	7