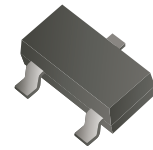


## ACPDT-24CAN-HF

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

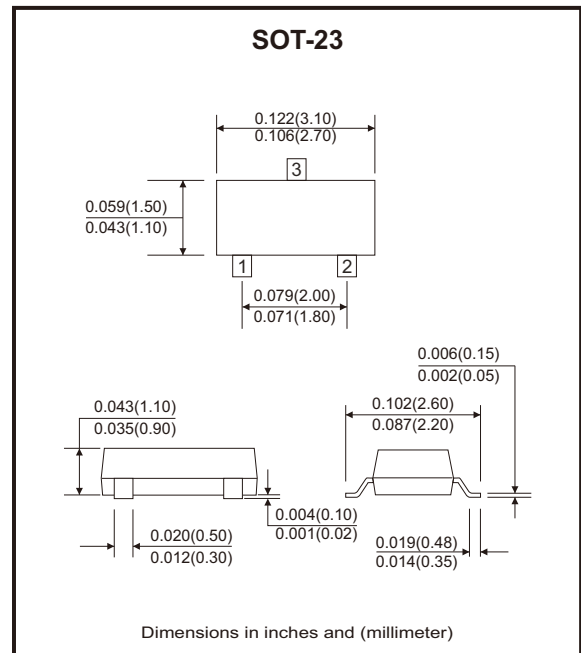


### Features

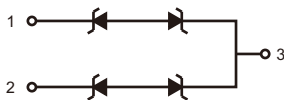
- Due to integrated diode structure only one small SOT-23 package is needed to protect two CAN bus lines.
- Max. peak pulse power: PPP=200W at tp=8/20ms.
- Low clamping voltage.
- Ultra low leakage current.
- ESD protection of up to 23KV.
- AEC-Q101 Qualified.

### Mechanical data

- Case: SOT-23, molded plastic.
- Mounting position: Any.



### Circuit Diagram



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

Parameter	Symbol	Value	Unit
Electrostatic discharge capability IEC 61000-4-2 (contact discharge) HBM MIL-STD 883	ESD	23 10	kV
Peak pulse power (tp = 8/20µs)	PPP	200	W
Peak pulse current (tp = 8/20µs)	I <sub>PP</sub>	3	A
Junction temperature	T <sub>j</sub>	150	°C
Ambient temperature range	T <sub>amb</sub>	-65 to +125	°C
Storage temperature range	T <sub>STG</sub>	-65 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		$V_{RWM}$			24	V
Reverse breakdown voltage	$I_T = 1\text{mA}$	$V_{BR}$	25.4	27.8	30.3	V
Reverse leakage current	$V_{RWM} = 24\text{V}$	$I_R$			50	nA
Clamping voltage	$I_{PP} = 1\text{A}$	$V_C$			40	V
	$I_{PP} = 3\text{A}$	$V_C$			70	
Junction capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	$C_d$		11		pF
Differential resistance	$I_R = 1\text{mA}$	$r_{dif}$			300	$\Omega$

## Rating and Characteristic Curves (ACPDT-24CAN-HF)

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

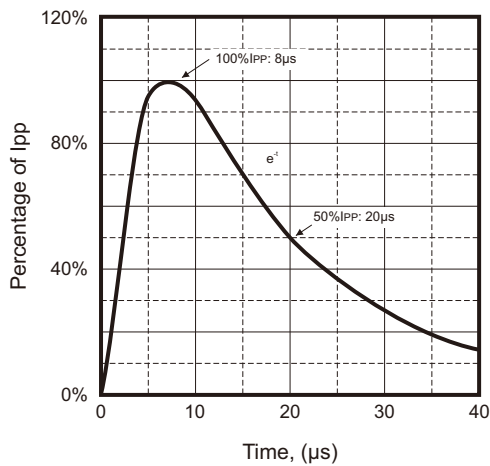


Fig.2 - ESD Pulse Waveform According to IEC 61000-4-2

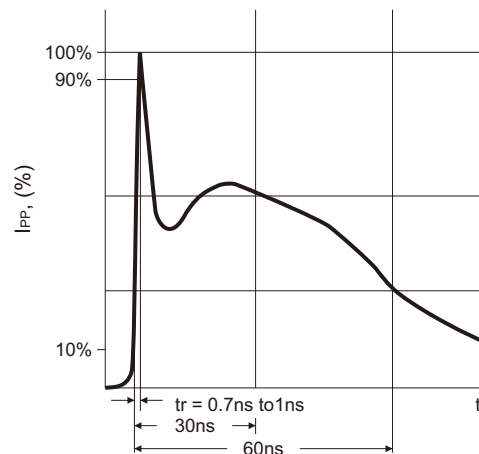


Fig.3 -  $C_d$  vs  $V_R$  Curve

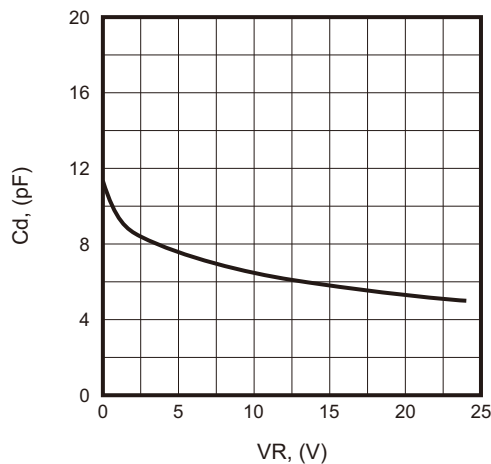
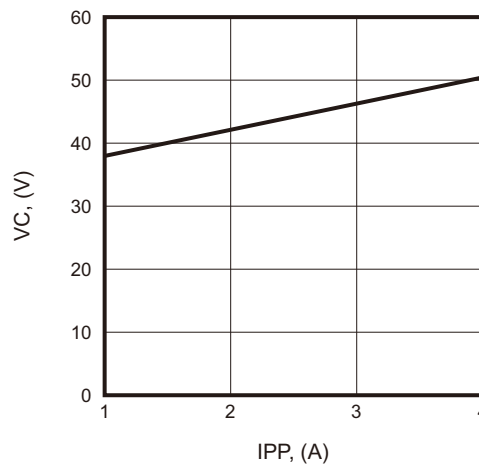
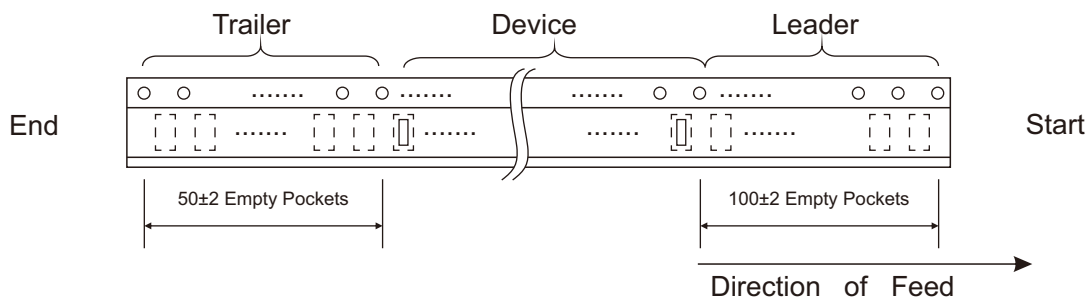
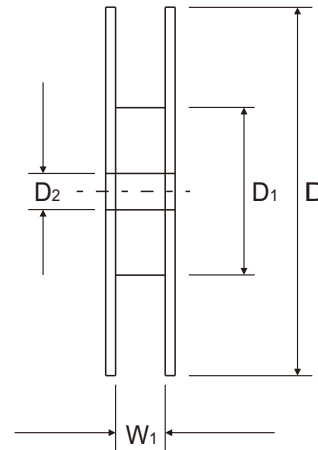
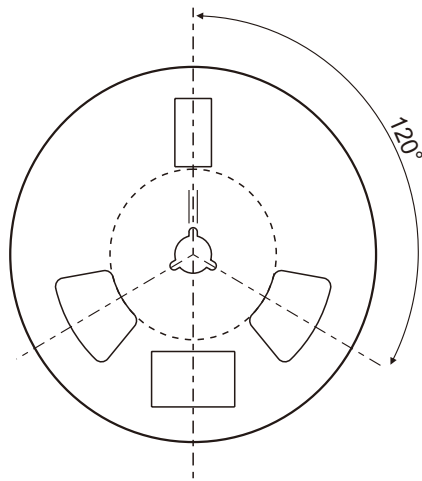
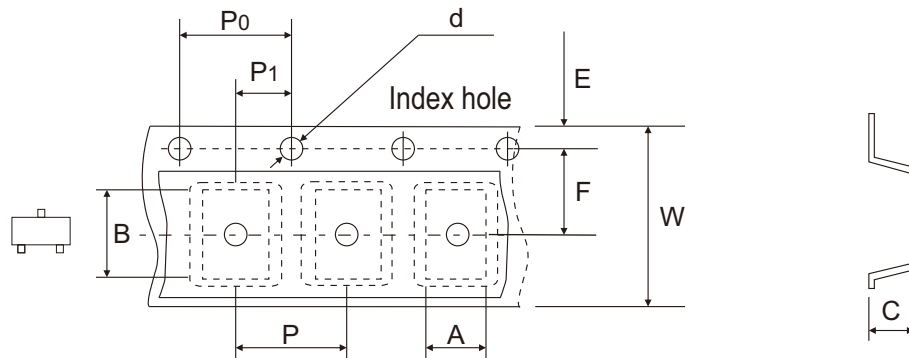


Fig.4 -  $V_C$  vs  $I_{PP}$  Curve



## Reel Taping Specification

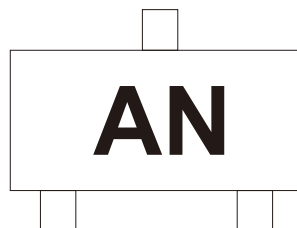


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

SOT-23	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 + 0.30 - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.315 + 0.012 - 0.004	0.374 ± 0.039

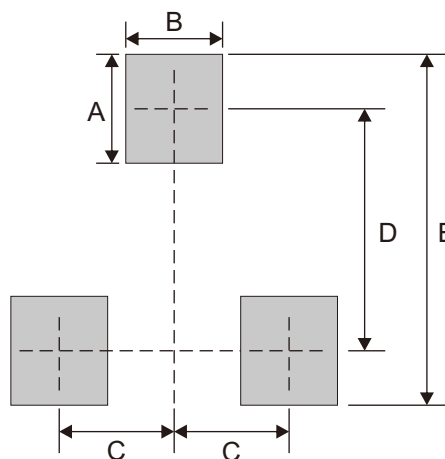
## Marking Code

Part Number	Marking Code
ACPDT-24CAN-HF	AN



## Suggested P.C.B. PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	0.95	0.037
D	2.00	0.079
E	2.90	0.114



## Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-23	3,000	7