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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



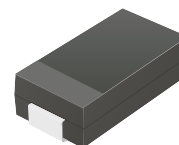
ATV50C110-HF Thru. ATV50C441-HF

Working Peak Reverse Voltage: 11 to 440 Volts

Power Dissipation: 5000 Watts

RoHS Device

Halogen Free

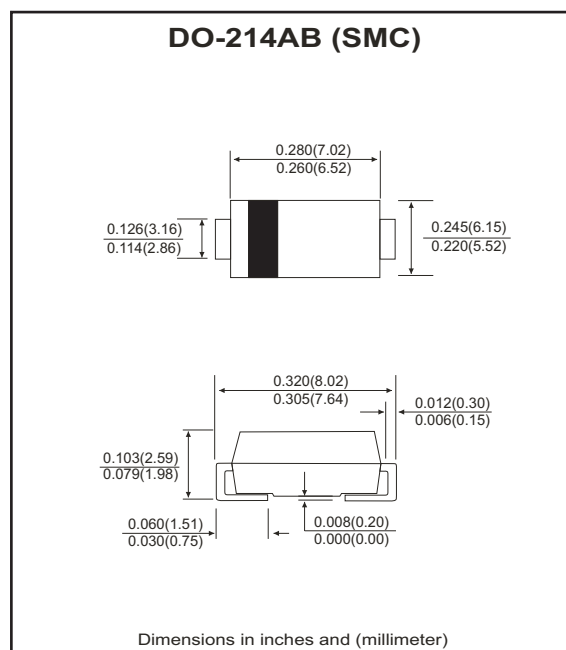


Features

- Glass passivated chip.
- 5000W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle): 0.01%.
- Low leakage.
- Excellent clamping capability.
- Very fast response time.
- Comply with AEC-Q101.

Mechanical data

- Case: DO-214AB(SMC), molded plastic.
- Epoxy: UL 94V-0 rate flame retardant.
- Lead: Solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end. except bipolar.
- Approx. weight: 0.21 grams.



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristics	Symbol	Value	Units
Peak power dissipation with a 10/1000 μ s waveform (Note 1)	P _{PP}	5000	W
Peak pulse current on 10/1000 μ s waveform (1)	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at T _L =75°C	P _D	6.5	W
Peak forward surge current, 8.3ms single half sine-wave uni-directional only (Note 2)	I _{FSM}	300	A
Maximum instantaneous forward voltage at 100A for uni-directional only (Note 3)	V _F	3.5/5.0	V
Operating junction temperature	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

Notes:

1. Non-Repetitive current pulse per Fig.5 and derated above T_A=25°C per Fig .1
2. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per maximum per minute maximum.
3. V_F<3.5V for devices of V_{BR} <200V and V_F <5.0V for devices of V_{BR}>201V

RATING AND CHARACTERISTIC CURVES (ATV50C110-HF thru. ATV50C441-HF)

Fig.1 - Pulse Derating Curve

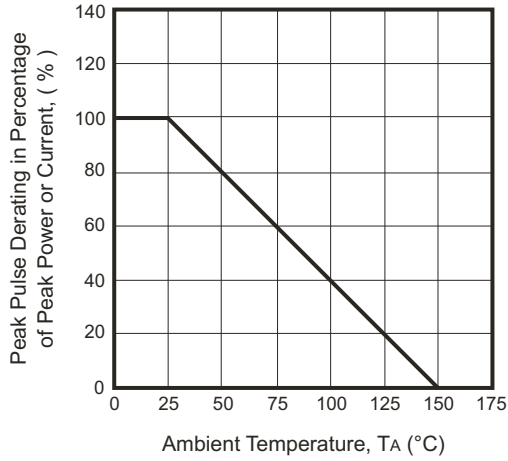


Fig.2 - Maximum Non-Repetitive Surge Current

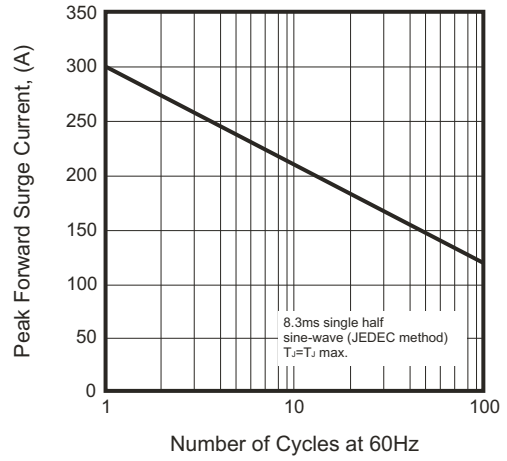


Fig.3 - Steady State Power Derating Curve

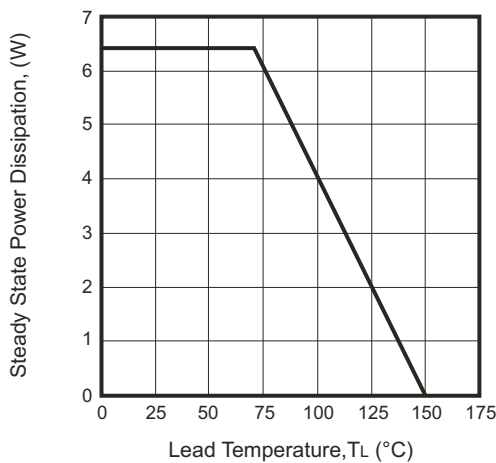


Fig.4 - Peak Pulse Power Rating Curve

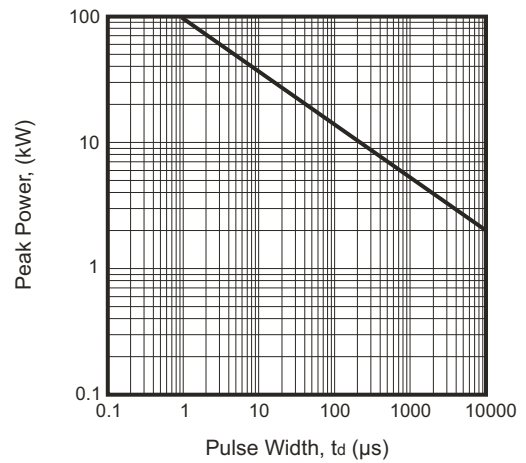


Fig.5 - Pulse Waveform

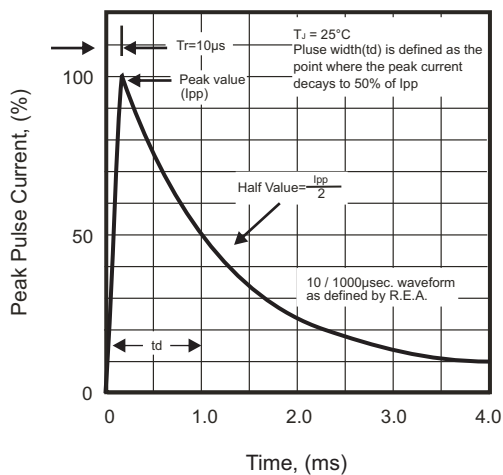
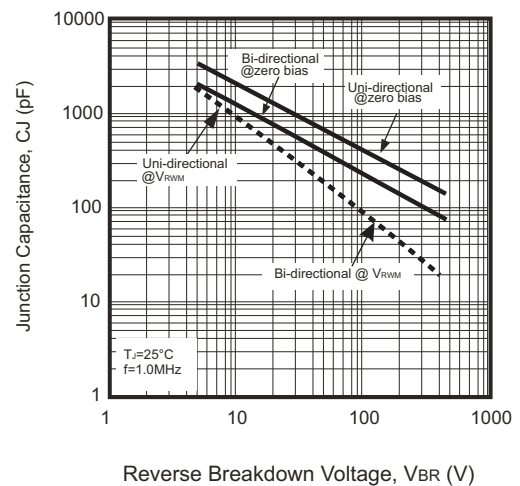


Fig.6 - Typical Junction Capacitance



SMD Transient Voltage Suppressor

Electrical Characteristics (ATV50C110-HF Thru. ATV50C441-HF)

Part No.	Breakdown voltage VBR @ IT			Maximum Reverse Leakage @VRWM IR (uA)	Working Peak Reverse Voltage VRWM (V)	Maximum Reverse Surge Current IPP (A)	Maximum Clamping Voltage @IPP Vc (V)	Device Marking Code	
	Min. (V)	Max. (V)	IT (mA)					UNI	BI
ATV50C110J(B)-HF	12.20	13.50	10	800	11.0	274.7	18.2	5PDX	5BDX
ATV50C120J(B)-HF	13.30	14.70	10	800	12.0	251.3	19.9	5PDZ	5BDZ
ATV50C130J(B)-HF	14.40	15.90	10	500	13.0	232.6	21.5	5PEE	5BEE
ATV50C140J(B)-HF	15.60	17.20	10	200	14.0	215.5	23.2	5PEG	5BEG
ATV50C150J(B)-HF	16.70	18.50	1	100	15.0	204.9	24.4	5PEK	5BEK
ATV50C160J(B)-HF	17.80	19.70	1	50	16.0	192.3	26.0	5PEM	5BEM
ATV50C170J(B)-HF	18.90	20.90	1	20	17.0	181.2	27.6	5PEP	5BEP
ATV50C180J(B)-HF	20.00	22.10	1	10	18.0	171.2	29.2	5PER	5BER
ATV50C190J(B)-HF	21.10	23.30	1	10	19.0	162.4	30.8	5PET	5BET
ATV50C200J(B)-HF	22.20	24.50	1	5	20.0	154.3	32.4	5PEV	5BEV
ATV50C220J(B)-HF	24.40	26.90	1	5	22.0	140.8	35.5	5PEX	5BEX
ATV50C240J(B)-HF	26.70	29.50	1	5	24.0	128.5	38.9	5PEZ	5BEZ
ATV50C260J(B)-HF	28.90	31.90	1	5	26.0	118.8	42.1	5PFE	5BFE
ATV50C280J(B)-HF	31.10	34.40	1	5	28.0	110.1	45.4	5PFG	5BFG
ATV50C300J(B)-HF	33.30	36.80	1	5	30.0	103.3	48.4	5PFK	5BFK
ATV50C330J(B)-HF	36.70	40.60	1	5	33.0	93.8	53.3	5PFM	5BFM
ATV50C360J(B)-HF	40.00	44.20	1	5	36.0	86.1	58.1	5PFP	5BFP
ATV50C400J(B)-HF	44.40	49.10	1	5	40.0	77.5	64.5	5PFR	5BFR
ATV50C430J(B)-HF	47.80	52.80	1	5	43.0	72.0	69.4	5PFT	5BFT
ATV50C450J(B)-HF	50.00	55.30	1	5	45.0	68.8	72.7	5PFV	5BFV
ATV50C480J(B)-HF	53.30	58.90	1	5	48.0	64.6	77.4	5PFX	5BFX
ATV50C510J(B)-HF	56.70	62.70	1	5	51.0	60.7	82.4	5PFZ	5BFZ
ATV50C540J(B)-HF	60.00	66.30	1	5	54.0	57.4	87.1	5PGE	5BGE
ATV50C580J(B)-HF	64.40	71.20	1	5	58.0	53.4	93.6	5PGG	5BGG
ATV50C600J(B)-HF	66.70	73.70	1	5	60.0	51.7	96.8	5PGK	5BGK
ATV50C640J(B)-HF	71.10	78.60	1	5	64.0	48.5	103.0	5PGM	5BGM
ATV50C700J(B)-HF	77.80	86.00	1	5	70.0	44.2	113.0	5PGP	5BGP
ATV50C750J(B)-HF	83.30	92.10	1	5	75.0	41.3	121.0	5PGR	5BGR
ATV50C780J(B)-HF	86.70	95.80	1	5	78.0	39.7	126.0	5PGT	5BGT
ATV50C800J(B)-HF	88.80	97.60	1	5	80.0	38.6	129.6	5PGB	5BGB
ATV50C850J(B)-HF	94.40	104.0	1	5	85.0	36.5	137.0	5PGV	5BGV
ATV50C900J(B)-HF	100.0	111.0	1	5	90.0	34.2	146.0	5PGX	5BGX
ATV50C101J(B)-HF	111.0	123.0	1	5	100.0	30.9	162.0	5PGZ	5BGZ
ATV50C111J(B)-HF	122.0	135.0	1	5	110.0	28.2	177.0	5PHE	5BHE
ATV50C121J(B)-HF	133.0	147.0	1	5	120.0	25.9	193.0	5PHG	5BHG
ATV50C131J(B)-HF	144.0	159.0	1	5	130.0	23.9	209.0	5PHK	5BHK
ATV50C141J(B)-HF	155.0	171.0	1	5	140.0	22.0	226.8	5PHB	5BHB
ATV50C151J(B)-HF	167.0	185.0	1	5	150.0	20.6	243.0	5PHM	5BHM
ATV50C161J(B)-HF	178.0	197.0	1	5	160.0	19.3	259.0	5PHP	5BHP
ATV50C171J(B)-HF	189.0	209.0	1	5	170.0	18.2	275.0	5PHR	5BHR

Note:

- 1) Suffix J denotes 5% tolerance devices.
- 2) Suffix B after part number to specify bi-directional devices.
- 3) For Bi-Directional devices having Vr of 10 volts and under, the Ir limit is double.

SMD Transient Voltage Suppressor



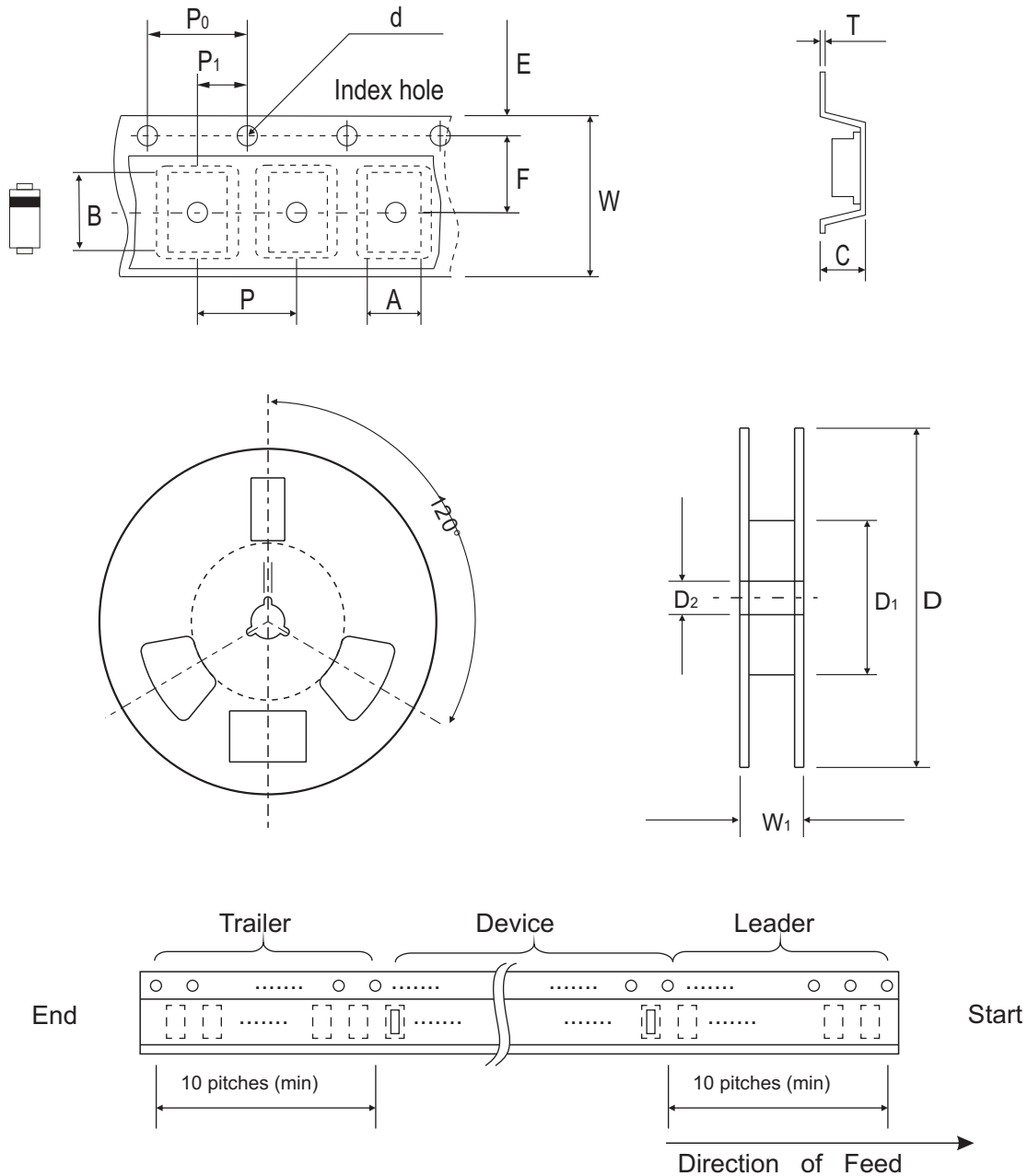
Electrical Characteristics (ATV50C110-HF Thru. ATV50C441-HF)

Part No.	Breakdown voltage VBR @ IT			Maximum Reverse Leakage @VRWM IR (uA)	Working Peak Reverse Voltage VRWM (V)	Maximum Reverse Surge Current IPP (A)	Maximum Clamping Voltage @IPP Vc (V)	Device Marking Code	
	Min. (V)	Max. (V)	IT (mA)					UNI	BI
ATV50C181J(B)-HF	200.0	220.0	1	5	180.0	17.1	291.6	5PHT	5BHT
ATV50C191J(B)-HF	211.0	232.0	1	5	190.0	16.2	307.8	5PHV	5BHV
ATV50C201J(B)-HF	224.0	247.0	1	5	200.0	15.4	324.0	5PHW	5BHW
ATV50C221J(B)-HF	246.0	272.0	1	5	220.0	14.0	356.0	5PHX	5BHX
ATV50C251J(B)-HF	279.0	309.0	1	5	250.0	12.3	405.0	5PHZ	5BHZ
ATV50C301J(B)-HF	335.0	371.0	1	5	300.0	10.3	486.0	5PJE	5BJE
ATV50C351J(B)-HF	391.0	432.0	1	5	350.0	8.8	567.0	5PJG	5BJG
ATV50C401J(B)-HF	447.0	494.0	1	5	400.0	7.7	648.0	5PJK	5BJK
ATV50C441J(B)-HF	492.0	543.0	1	5	440.0	7.0	713.0	5PJM	5BJM

Note:

- 1) Suffix J denotes 5% tolerance devices.
- 2) Suffix B after part number to specify bi-directional devices.
- 3) For Bi-Directional devices having VR of 10 volts and under, the IR limit is double.

Reel Taping Specification



DO-214AB (SMC)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	6.05 ± 0.10	8.31 ± 0.10	3.29 (max)	1.55 ± 0.10	330.00	50.00 (min)	13.00 ± 0.20
	(inch)	0.238 ± 0.004	0.327 ± 0.004	0.130 (max)	0.061 ± 0.004	13.000	1.969 (min)	0.512 ± 0.008

DO-214AB (SMC)	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	7.50 ± 0.10	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	16.00 ± 0.30	22.40 (max)
	(inch)	0.069 ± 0.004	0.295 ± 0.004	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.630 ± 0.012	0.882 (max)

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

REV:A

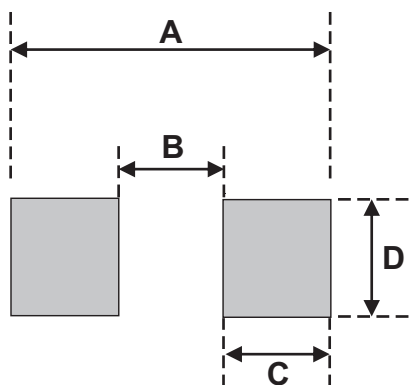
Marking Code



1. XXXX : Marking code(see Page. 3~4)
2. : Cathod Band

Suggested PAD Layout

SIZE	DO-214AB(SMC)	
	(mm)	(inch)
A	8.13	0.320
B	4.69 MAX	0.185 MAX
C	1.52 MIN	0.06 MIN
D	3.20 MIN	0.126 MIN



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-214AB (SMC)	3,000	13