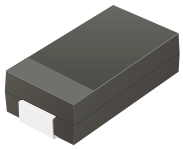
TV06A5V0-HF Thru. TV06A580-HF

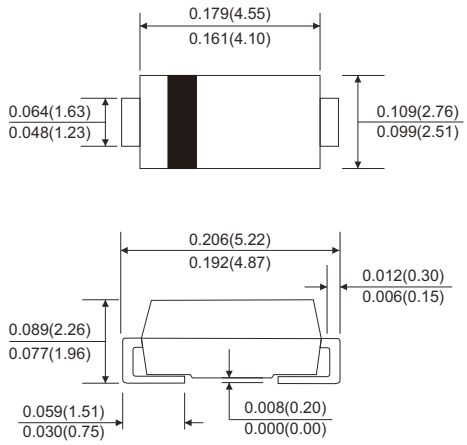
Working Peak Reverse Voltage: 5.0 to 58 Volts
Peak Pulse Power: 600 Watts
RoHS Device
Halogen Free



Features

- Glass passivated chip.
- Low leakage.
- 600W peak pulse power capability with a 10/1000μs waveform, repetitive rate (duty cycle): 0.01%.
- Uni and Bidirectional unit.
- Excellent clamping capability.
- Very fast response time.

DO-214AC (SMA)



Dimensions in inches and (millimeter)

Mechanical data

- Case: SMA/DO-214AC, 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.
- Mounting position: Any.

Circuit Diagram

Bi-directional Uni-directional

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 10/1000μs waveform (Note 1)	P_{PP}	600	W
Peak pulse current with a 10/1000μs waveform (Note 1)	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at T_L=75°C	P_D	3.0	W
Peak forward surge current, 8.3ms single half sine-wave, uni-directional only (Note 2)	I_{FSM}	60	A
Maximum instantaneous forward voltage at 25A for uni-directional only	V_F	3.5	V
Operating junction temperature range	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 Ta=25°C per Fig.1
2. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

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Rating and Characteristic Curves (TV06A5V0-HF Thru. TV06A580-HF)

Fig.1 - Pulse Derating Curve

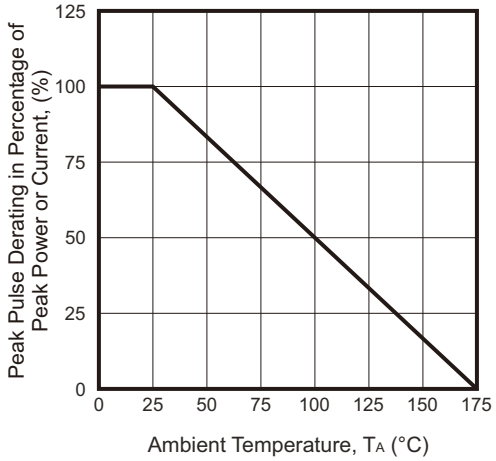


Fig.2 - Max. Non-repetitive Surge Current

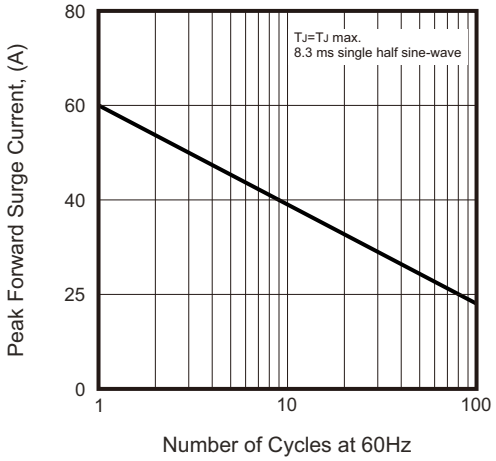


Fig.3 - Steady State Power Derating Curve

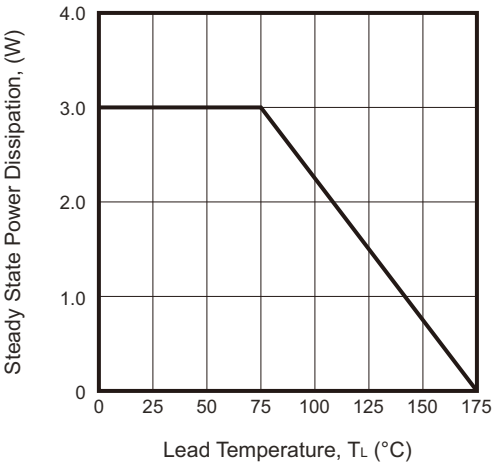


Fig.4 - Peak Pulse Power Rating Curve

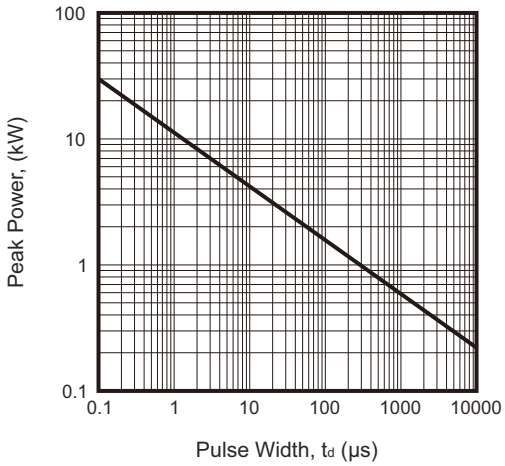


Fig.5 - Pulse Waveform

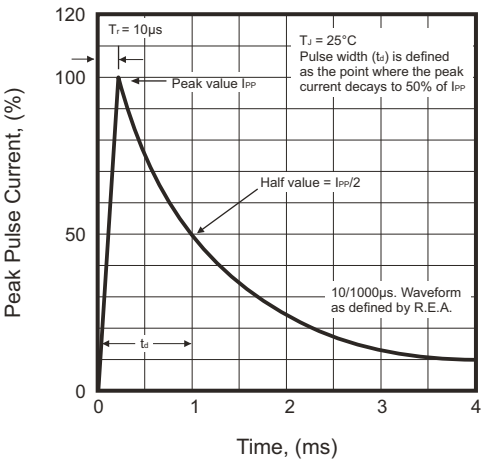
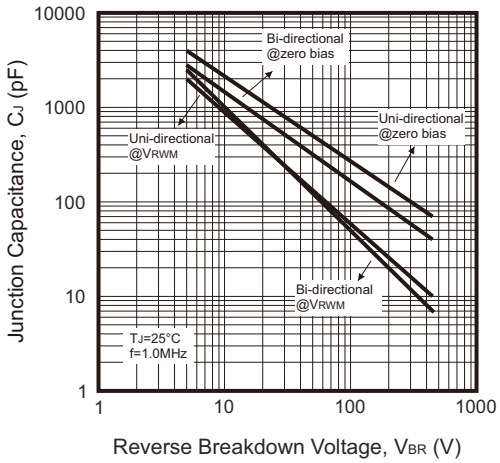


Fig.6 - Peak Pulse Power Rating Curve



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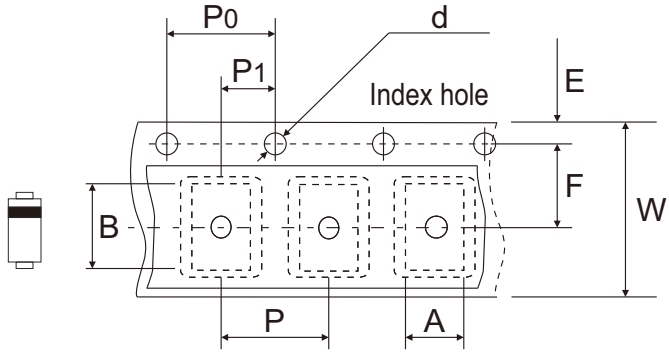
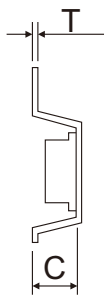
Electrical Characteristics (TV06A5V0-HF Thru. TV06A580-HF)

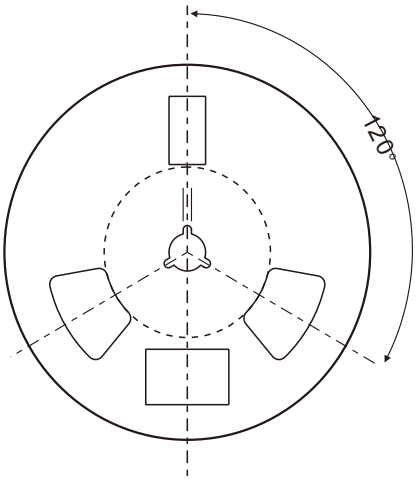
Part No	Breakdown voltage V_{BR} @ I_T			Maximum Reverse Leakage @V_{RWM}	Working Peak Reverse Voltage	Maximum Reverse Surge Current @ 10/1000μs sinewave	Maximum Clamping Voltage @I_{PP}	Marking Code	
	V_{BR} Min. (V)	V_{BR} Max. (V)	I_T(mA)	I_R (μA)	V_{RWM} (V)	I_{PP} (A)	V_C (V)	UNI	BI
TV06A5V0J-HF	6.40	7.00	10	800	5.00	65.2	9.20	KE	
TV06A6V0J(B)-HF	6.67	7.37	10	800	6.00	58.3	10.3	KG	AG
TV06A6V5J(B)-HF	7.22	7.98	10	500	6.50	53.6	11.2	KK	AK
TV06A7V0J(B)-HF	7.78	8.60	10	200	7.00	50.0	12.0	KM	AM
TV06A7V5J(B)-HF	8.33	9.21	1	100	7.50	46.5	12.9	KP	AP
TV06A8V0J(B)-HF	8.89	9.83	1	50	8.00	44.1	13.6	KR	AR
TV06A8V5J(B)-HF	9.44	10.4	1	10	8.50	41.7	14.4	KT	AT
TV06A9V0J(B)-HF	10.0	11.1	1	5	9.00	39.0	15.4	KV	AV
TV06A100J(B)-HF	11.1	12.3	1	1	10.0	35.3	17.0	KX	AX
TV06A110J(B)-HF	12.2	13.5	1	1	11.0	33.0	18.2	KZ	AZ
TV06A120J(B)-HF	13.3	14.7	1	1	12.0	30.2	19.9	LE	BE
TV06A130J(B)-HF	14.4	15.9	1	1	13.0	27.9	21.5	LG	BG
TV06A140J(B)-HF	15.6	17.2	1	1	14.0	25.9	23.2	LK	BK
TV06A150J(B)-HF	16.7	18.5	1	1	15.0	24.6	24.4	LM	BM
TV06A160J(B)-HF	17.8	19.7	1	1	16.0	23.1	26.0	LP	BP
TV06A170J(B)-HF	18.9	20.9	1	1	17.0	21.7	27.6	LR	BR
TV06A180J(B)-HF	20.0	22.1	1	1	18.0	20.5	29.2	LT	BT
TV06A190J(B)-HF	21.1	23.3	1	1	19.0	19.5	30.8	LB	BB
TV06A200J(B)-HF	22.2	24.5	1	1	20.0	18.5	32.4	LV	BV
TV06A220J(B)-HF	24.4	26.9	1	1	22.0	16.9	35.5	LX	BX
TV06A240J(B)-HF	26.7	29.5	1	1	24.0	15.4	38.9	LZ	BZ
TV06A260J(B)-HF	28.9	31.9	1	1	26.0	14.3	42.1	ME	CE
TV06A280J(B)-HF	31.1	34.4	1	1	28.0	13.2	45.4	MG	CG
TV06A300J(B)-HF	33.3	36.8	1	1	30.0	12.4	48.4	MK	CK
TV06A330J(B)-HF	36.7	40.6	1	1	33.0	11.3	53.3	MM	CM
TV06A360J(B)-HF	40.0	44.2	1	1	36.0	10.3	58.1	MP	CP
TV06A400J(B)-HF	44.4	49.1	1	1	40.0	9.30	64.5	MR	CR
TV06A430J(B)-HF	47.8	52.8	1	1	43.0	8.65	69.4	MT	CT
TV06A450J(B)-HF	50.0	55.3	1	1	45.0	8.25	72.7	MV	CV
TV06A480J(B)-HF	53.3	58.9	1	1	48.0	7.75	77.4	MX	CX
TV06A510J(B)-HF	56.7	62.7	1	1	51.0	7.28	82.4	MZ	CZ
TV06A540J(B)-HF	60.0	66.3	1	1	54.0	6.89	87.1	NE	DE
TV06A580J(B)-HF	64.4	71.2	1	1	58.0	6.41	93.6	NG	DG

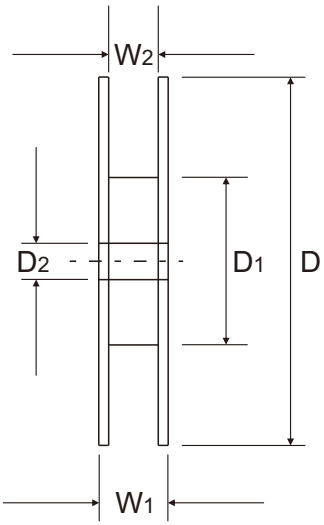
Notes: 1. Suffix J denotes 5% tolerance devices.
2. Suffix B after part number to specify bi-directional devices.
3. For bi-directional devices having V_R of 10 volts and under, the I_R limit is double.

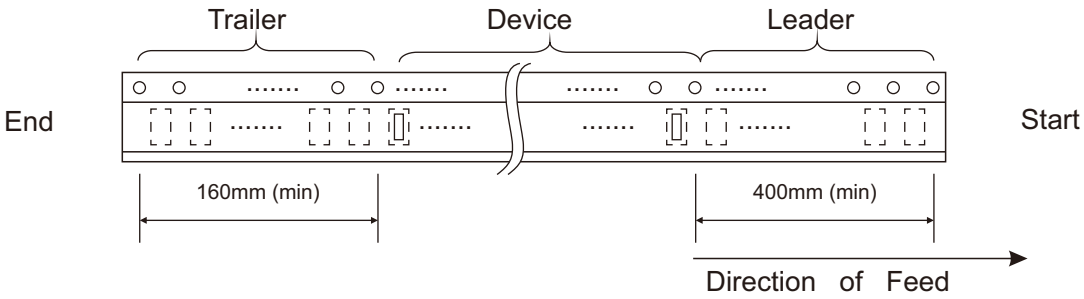
Reel Taping Specification











	SYMBOL	A	B	C	d	D	D1	D2	E
DO-214AC (SMA)	(mm)	See Note 1			1.55 ± 0.05	330.00	50.00 (Min.)	13.00 ± 0.50	1.75 ± 0.05
	(inch)				0.061 ± 0.002	12.992	1.969 (Min.)	0.512 ± 0.020	0.069 ± 0.002

	SYMBOL	F	P	P0	P1	T	W	W1	W2
DO-214AC (SMA)	(mm)	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.40 (Max.)	12.00 ± 0.10	18.40 (Max.)	14.40 (Max.)
	(inch)	0.217 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.016 (Max.)	0.472 ± 0.004	0.724 (Max.)	0.567 (Max.)

Notes: 1. A, B, and C the clearance between the component and the cavity must be within 0.5mm max.
for 8mm tape and 12mm tape, 1.0mm max. for 16mm tape and 24mm tape.

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