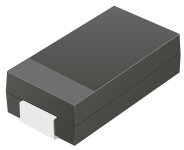
TV05A5V0-G Thru. TV05A191-G

Working Peak Reverse Voltage: 5.0 to 190 Volts
Peak Pulse Power: 500 Watts
RoHS Device



Features

-Glass passivated chip.

-Low leakage.

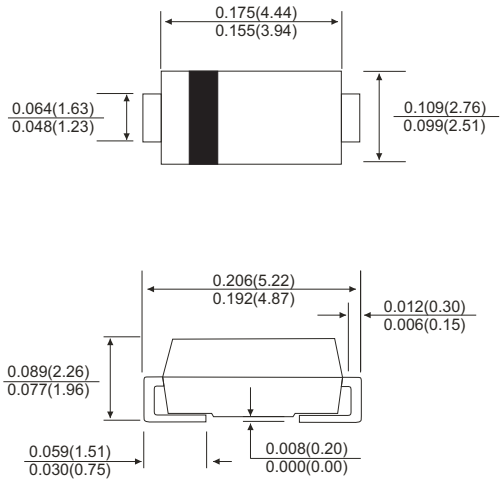
-500W peak pulse power capability with a 10/1000μs waveform, repetitive rate (duty cycle): 0.01%.

-Uni and Bidirectional unit.

-Excellent clamping capability.

-Very fast response time.

DO-214AC (SMA)



Dimensions in inches and (millimeter)

Mechanical data

-Case: JEDEC DO-214AC, molded plastic.

-Epoxy: UL 94V-0 rate flame retardant.

-Terminals: Axial leads, solderable per MIL-STD-202, method 208.

-Polarity: Color band denotes cathode end.

-Mounting position: Any.

-Approx. weight: 0.069 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 on 10/1000μs waveform	P_{PP}	Minimum 500	Watts
Peak pulse current on 10/1000μs waveform	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at T_L=75°C	P_D	3.0	Watts
Peak forward surge current, 8.3ms single half sine-wave, uni-directional only (Note 1)	I_{FSM}	70	A
Maximum instantaneous forward voltage at 25.0A 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. 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 (TV05A5V0-G Thru. TV05A191-G)

Fig.1 - Pulse Derating Curve

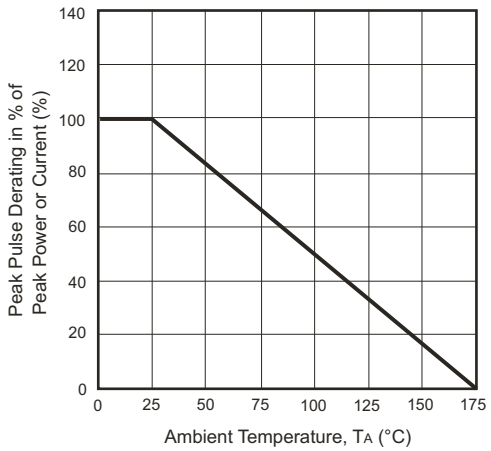


Fig.2 - Steady State Power Derating Curve

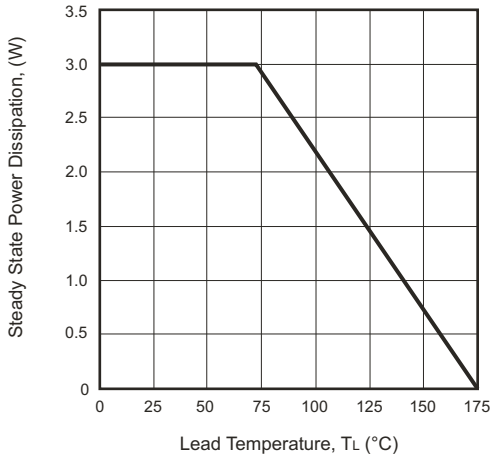


Fig.3 - Max. Non-repetitive Surge Current

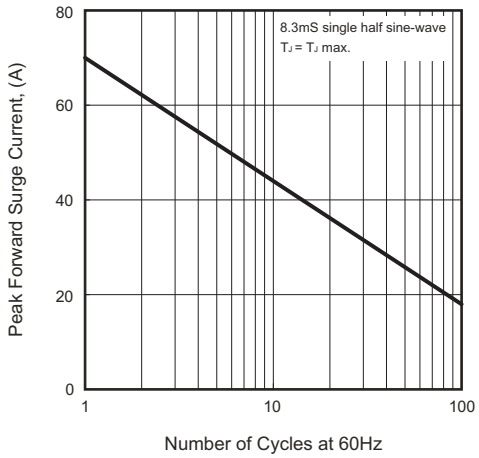


Fig.4 - Peak Pulse Power Rating Curve

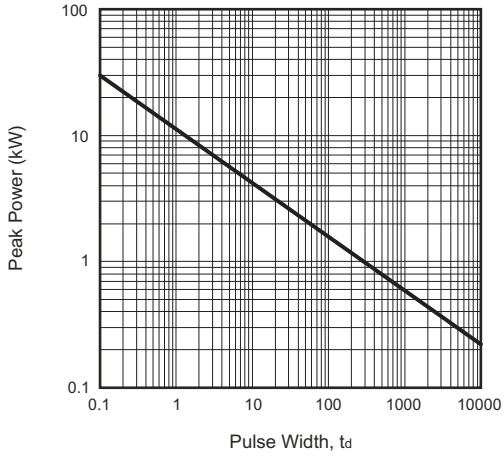
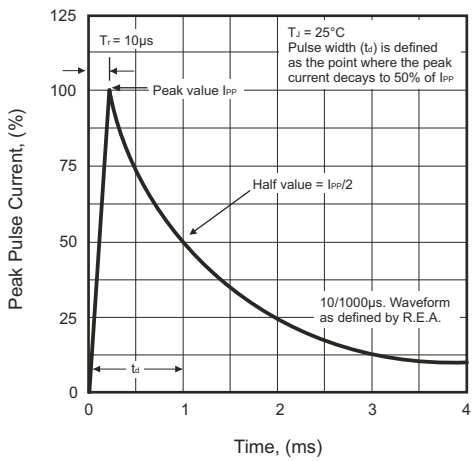


Fig.5 - Pulse Waveform



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Electrical Characteristics (TV05A5V0-G Thru. TV05A191-G)

Part No	Breakdown voltage V_{BR} @ I_T			Maximum Reverse Leakage @V_{RWM} I_R (uA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current @ 10/1000us sinewave I_{PP} (A)	Maximum Clamping Voltage @I_{PP} V_C (V)	Marking Code	
	V_{BR} Min. (V)	V_{BR}Max. (V)	I_T(mA)					UNI	BI
TV05A5V0J(B)-G	6.40	7.00	10	600	5.00	54.3	9.20	5AE	5WE
TV05A6V0J(B)-G	6.67	7.37	10	600	6.00	48.5	10.3	5AG	5WG
TV05A6V5J(B)-G	7.22	7.98	10	400	6.50	44.6	11.2	5AK	5WK
TV05A7V0J(B)-G	7.78	8.60	10	150	7.00	41.7	12.0	5AM	5WM
TV05A7V5J(B)-G	8.33	9.21	1	50	7.50	38.8	12.9	5AP	5WP
TV05A8V0J(B)-G	8.89	9.83	1	25	8.00	36.8	13.6	5AR	5WR
TV05A8V5J(B)-G	9.44	10.4	1	5	8.50	34.7	14.4	5AT	5WT
TV05A9V0J(B)-G	10.0	11.1	1	5	9.00	32.5	15.4	5AV	5WV
TV05A100J(B)-G	11.1	12.3	1	5	10.0	29.4	17.0	5AX	5WX
TV05A110J(B)-G	12.2	13.5	1	5	11.0	27.5	18.2	5AZ	5WZ
TV05A120J(B)-G	13.3	14.7	1	5	12.0	25.1	19.9	5BE	5XE
TV05A130J(B)-G	14.4	15.9	1	5	13.0	23.3	21.5	5BG	5XG
TV05A140J(B)-G	15.6	17.2	1	5	14.0	21.6	23.2	5BK	5XK
TV05A150J(B)-G	16.7	18.5	1	5	15.0	20.5	24.4	5BM	5XM
TV05A160J(B)-G	17.8	19.7	1	5	16.0	19.2	26.0	5BP	5XP
TV05A170J(B)-G	18.9	20.9	1	5	17.0	18.1	27.6	5BR	5XR
TV05A180J(B)-G	20.0	22.1	1	5	18.0	17.1	29.2	5BT	5XT
TV05A190J(B)-G	21.1	23.3	1	5	19.0	16.2	30.8	5BV	5XV
TV05A200J(B)-G	22.2	24.5	1	5	20.0	15.4	32.4	5BX	5XX
TV05A220J(B)-G	24.4	26.9	1	5	22.0	14.1	35.5	5BZ	5XZ
TV05A240J(B)-G	26.7	29.5	1	5	24.0	12.9	38.9	5CE	5YE
TV05A260J(B)-G	28.9	31.9	1	5	26.0	11.9	42.1	5CG	5YG
TV05A280J(B)-G	31.1	34.4	1	5	28.0	11.0	45.4	5CK	5YK
TV05A300J(B)-G	33.3	36.8	1	5	30.0	10.3	48.4	5CM	5YM
TV05A330J(B)-G	36.7	40.6	1	5	33.0	9.38	53.3	5CP	5YP
TV05A360J(B)-G	40.0	44.2	1	5	36.0	8.61	58.1	5CR	5YR
TV05A400J(B)-G	44.4	49.1	1	5	40.0	7.75	64.5	5CT	5YT
TV05A430J(B)-G	47.8	52.8	1	5	43.0	7.20	69.4	5CV	5YV
TV05A450J(B)-G	50.0	55.3	1	5	45.0	6.88	72.7	5CX	5YX
TV05A480J(B)-G	53.3	58.9	1	5	48.0	6.46	77.4	5CZ	5YZ
TV05A510J(B)-G	56.7	62.7	1	5	51.0	6.07	82.4	5RE	5ZE
TV05A540J(B)-G	60.0	66.3	1	5	54.0	5.74	87.1	5RG	5ZG
TV05A580J(B)-G	64.4	71.2	1	5	58.0	5.34	93.6	5RK	5ZK
TV05A600J(B)-G	66.7	73.7	1	5	60.0	5.17	96.8	5RM	5ZM
TV05A640J(B)-G	71.1	78.6	1	5	64.0	4.85	103	5RP	5ZP
TV05A700J(B)-G	77.8	86.0	1	5	70.0	4.42	113	5RR	5ZR
TV05A750J(B)-G	83.3	92.1	1	5	75.0	4.13	121	5RT	5ZT
TV05A780J(B)-G	86.7	95.8	1	5	78.0	3.97	126	5RV	5ZV
TV05A800J(B)-G	88.8	97.6	1	5	80.0	3.86	130	5RX	5ZX
TV05A850J(B)-G	94.4	104	1	5	85.0	3.65	137	5RZ	5ZZ

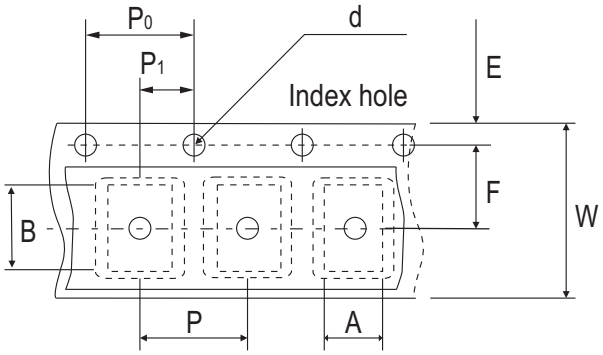
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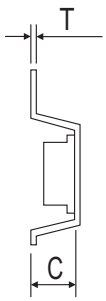
Electrical Characteristics (TV05A5V0-G Thru. TV05A191-G)

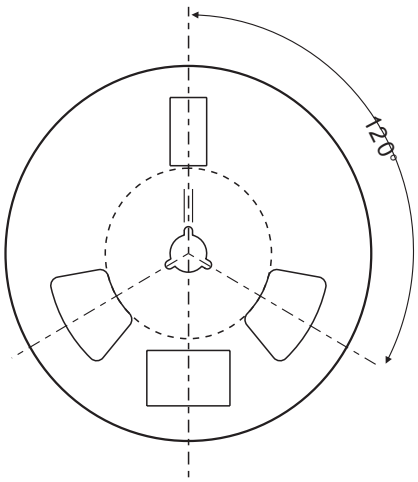
Part No	Breakdown voltage V_{BR} @ I_T			Maximum Reverse Leakage @V_{RWM} I_R (uA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current @ 10/1000us sinewave I_{PP} (A)	Maximum Clamping Voltage @I_{PP} V_C (V)	Marking Code	
	V_{BR} Min. (V)	V_{BR}Max. (V)	I_T(mA)					UNI	BI
TV05A900J(B)-G	100	111	1	5	90.0	3.42	146	5SE	5VE
TV05A101J(B)-G	111	123	1	5	100	3.09	162	5SG	5VG
TV05A111J(B)-G	122	135	1	5	110	2.82	177	5SK	5VK
TV05A121J(B)-G	133	147	1	5	120	2.59	193	5SM	5VM
TV05A131J(B)-G	144	159	1	5	130	2.39	209	5SP	5VP
TV05A141J(B)-G	155	171	1	5	140	2.20	227	5SR	5VR
TV05A151J(B)-G	167	185	1	5	150	2.06	243	5ST	5VT
TV05A161J(B)-G	178	197	1	5	160	1.93	259	5SV	5VV
TV05A171J(B)-G	189	209	1	5	170	1.82	275	5SX	5VX
TV05A181J(B)-G	200	220	1	5	180	1.71	292	5SZ	5VZ
TV05A191J(B)-G	211	232	1	5	190	1.62	308	5TE	5UE

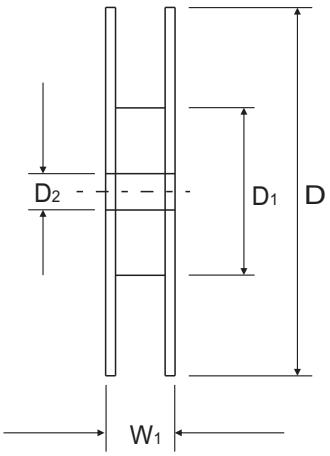
Notes:
1. Suffix J denotes 5% tolerance devices.
2. Suffix B after part number to specify bi-directional devices.
3. For bi-directional devices having V_R of 10 volts and under, the I_R limit is double.
4. For Uni-directional devices V_F max=3.5V at I_F=25 A 300us square wave pulse.

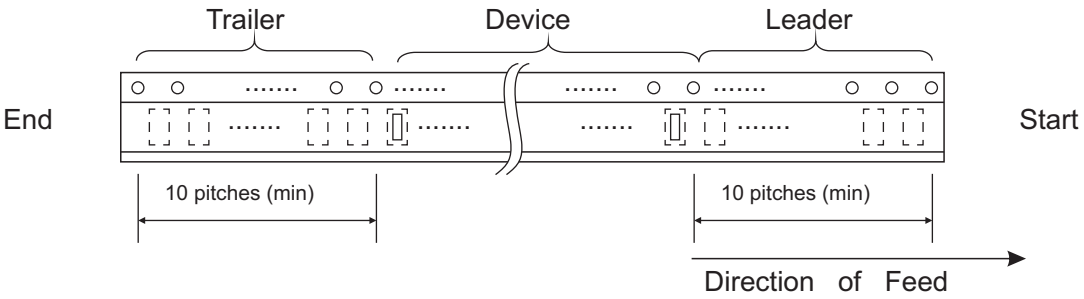
Reel Taping Specification











DO-214AC (SMA)	SYMBOL	A	B	C	d	D	D_1	D_2
	(mm)	2.79 ± 0.10	5.33 ± 0.10	4.50 (max)	1.75 ± 0.10	330MAX	50.0 MIN.	13.0 ± 0.2
	(inch)	0.110(max)	0.210 ± 0.004	0.177 (max)	0.069 ± 0.004	13.00MAX	1.969 MIN.	0.512 ± 0.008

DO-214AC (SMA)	SYMBOL	E	F	P	P_0	P_1	W	W_1
	(mm)	1.75 ± 0.10	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	12.0 ± 0.30	18.4 MAX.
	(inch)	0.069 ± 0.004	0.216 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.472 ± 0.012	0.724 MAX

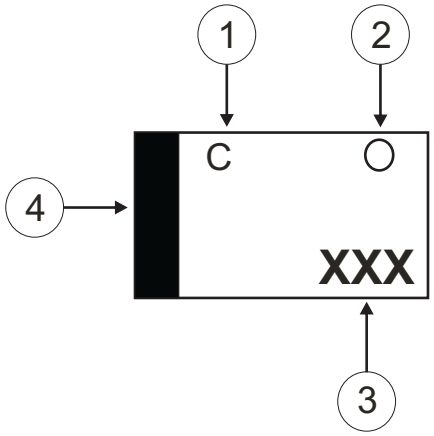
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Marking Code

1. C: COMCHIP
2. ○: Package

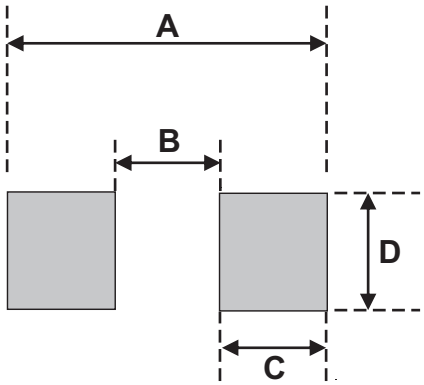
○	PKG
A	SMA
B	SMB
C	SMC

3. XXX: Marking code (see Page.3~4)
4. ▮: Cathod Band



Suggested PAD Layout

SIZE	DO-214AC(SMA)	
	(mm)	(inch)
A	5.28	0.208
B	1.88 MAX	0.074 MAX
C	1.52 MIN	0.060 MIN
D	1.68 MIN	0.066 MIN



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-214AC (SMA)	5,000	13