



AUTCDH SERIES

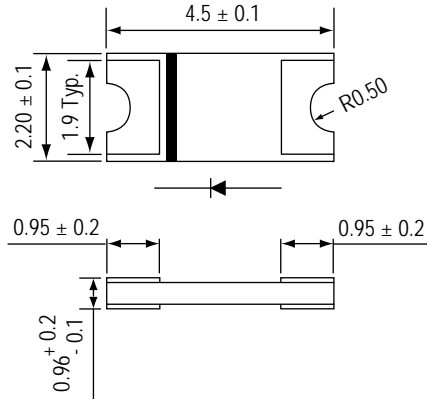
SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Breakdown Voltage - 5.0 to 190 Volts

Peak Pulse Power-400 Watts

PATENTED

2010



*Dimensions : millimeters

SuperChipTM



FEATURES

- * Halogen-free type
- * Glass passivated chip
- * 400 W peak pulse power capability with a 10/1000 ms waveform, repetitive rate (duty cycle) : 0.01%
- * Low leakage
- * Excellent clamping capability
- * Very fast response time
- * Comply with AEC-Q101
- * Automotive

MECHANICAL DATA

Case : Packed with FRP substrate and epoxy underfilled

Terminals : Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.

Polarity : Color band denotes positive end (cathode) except for bidirectional types

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%*

RATING	SYMBOL	VALUE	UNITS
Peak power dissipation with a 10/1000 μ s waveform (note 1)	P _{PPM}	400	Watts
Peak pulse current with a 10/1000 μ s waveform (note 1)	I _{PPM}	See next table	Amps
Power dissipation on infinite heatsink at T _L = 75	P _D	1.0	Watts
Peak forward surge current, 8.3ms single half sine-wave unidirectional only (note 2)	I _{FSM}	40	Amps
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	

NOTES : (1) Non-repetitive current pulse per Fig. 5 and derated above T_A = 25 per Fig. 1
(2) Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
(3) Preliminary draft.

TCD PART NUMBER		Working Peak Reverse Voltage V _{VRWM} (V)	Breakdown Voltage V _{BR} @I _T			Maximum Clamping Voltage V _C (V) @ I _{PP}	Maximum Reverse Surge Current I _{PP} (A)	Maximum Reverse Leakage I _R (μA) @V _{VRWM}
UNI- POLAR	BI-POLAR		Min. (V)	Max. (V)	I _T (mA)			
AUTCD5.0AH	AUTCD5.0CAH	5.0	6.4	7.00	10	9.2	43.48	800
AUTCD6.0AH	AUTCD6.0CAH	6.0	6.7	7.37	10	10.3	38.83	800
AUTCD6.5AH	AUTCD6.5CAH	6.5	7.2	7.98	10	11.2	35.71	500
AUTCD7.0AH	AUTCD7.0CAH	7.0	7.8	8.60	10	12.0	33.33	200
AUTCD7.5AH	AUTCD7.5CAH	7.5	8.3	9.21	1	12.9	31.01	100
AUTCD8.0AH	AUTCD8.0CAH	8.0	8.9	9.83	1	13.6	29.41	50
AUTCD8.5AH	AUTCD8.5CAH	8.5	9.4	10.4	1	14.4	27.78	10
AUTCD9.0AH	AUTCD9.0CAH	9.0	10.0	11.1	1	15.4	25.97	5
AUTCD10AH	AUTCD10CAH	10	11.1	12.3	1	17.0	23.53	5
AUTCD11AH	AUTCD11CAH	11	12.2	13.5	1	18.2	21.98	5
AUTCD12AH	AUTCD12CAH	12	13.3	14.7	1	19.9	20.10	5
AUTCD13AH	AUTCD13CAH	13	14.4	15.9	1	21.5	18.60	5
AUTCD14AH	AUTCD14CAH	14	15.6	17.2	1	23.2	17.24	5
AUTCD15AH	AUTCD15CAH	15	16.7	18.5	1	24.4	16.39	5
AUTCD16AH	AUTCD16CAH	16	17.8	19.7	1	26.0	15.38	5
AUTCD17AH	AUTCD17CAH	17	18.9	20.9	1	27.6	14.49	5
AUTCD18AH	AUTCD18CAH	18	20.0	22.1	1	29.2	13.70	5
AUTCD19AH	AUTCD19CAH	19	21.1	23.3	1	30.8	13.00	5
AUTCD20AH	AUTCD20CAH	20	22.2	24.5	1	32.4	12.35	5
AUTCD22AH	AUTCD22CAH	22	24.4	26.9	1	35.5	11.27	5
AUTCD24AH	AUTCD24CAH	24	26.7	29.5	1	38.9	10.28	5
AUTCD26AH	AUTCD26CAH	26	28.9	31.9	1	42.1	9.50	5
AUTCD28AH	AUTCD28CAH	28	31.1	34.4	1	45.4	8.81	5
AUTCD30AH	AUTCD30CAH	30	33.3	36.8	1	48.4	8.26	5
AUTCD33AH	AUTCD33CAH	33	36.7	40.6	1	53.3	7.50	5
AUTCD36AH	AUTCD36CAH	36	40.0	44.2	1	58.1	6.88	5
AUTCD40AH	AUTCD40CAH	40	44.4	49.1	1	64.5	6.20	5
AUTCD43AH	AUTCD43CAH	43	47.8	52.8	1	69.4	5.76	5
AUTCD45AH	AUTCD45CAH	45	50.0	55.3	1	72.7	5.50	5
AUTCD48AH	AUTCD48CAH	48	53.3	58.9	1	77.4	5.17	5
AUTCD51AH	AUTCD51CAH	51	56.7	62.7	1	82.4	4.85	5
AUTCD54AH	AUTCD54CAH	54	60.0	66.3	1	87.1	4.59	5
AUTCD58AH	AUTCD58CAH	58	64.4	71.2	1	93.6	4.27	5
AUTCD60AH	AUTCD60CAH	60	66.7	73.7	1	96.8	4.13	5
AUTCD64AH	AUTCD64CAH	64	71.1	78.6	1	103	3.88	5
AUTCD70AH	AUTCD70CAH	70	77.8	86.0	1	113	3.54	5
AUTCD75AH	AUTCD75CAH	75	83.3	92.1	1	121	3.31	5
AUTCD78AH	AUTCD78CAH	78	86.7	95.8	1	126	3.17	5
AUTCD80AH	AUTCD80CAH	80	88.8	97.6	1	130	3.09	5
AUTCD85AH	AUTCD85CAH	85	94.4	104	1	137	2.92	5
AUTCD90AH	AUTCD90CAH	90	100	111	1	146	2.74	5
AUTCD100AH	AUTCD100CAH	100	111	123	1	162	2.47	5
AUTCD110AH	AUTCD110CAH	110	122	135	1	177	2.26	5
AUTCD120AH	AUTCD120CAH	120	133	147	1	193	2.07	5
AUTCD130AH	AUTCD130CAH	130	144	159	1	209	1.91	5
AUTCD140AH	AUTCD140CAH	140	155	171	1	227	1.76	5
AUTCD150AH	AUTCD150CAH	150	167	185	1	243	1.65	5
AUTCD160AH	AUTCD160CAH	160	178	197	1	259	1.54	5
AUTCD170AH	AUTCD170CAH	170	189	209	1	275	1.45	5
AUTCD180AH	AUTCD180CAH	180	200	220	1	292	1.37	5
AUTCD190AH	AUTCD190CAH	190	211	232	1	308	1.30	5

NOTE : 1. Suffix " A " denotes 5% tolerance device.
2. Add suffix " CA " 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 .

RATINGS AND CHARACTERISTIC CURVES OF TCDH SERIES

FIG. 1- PULSE DERATING CURVE

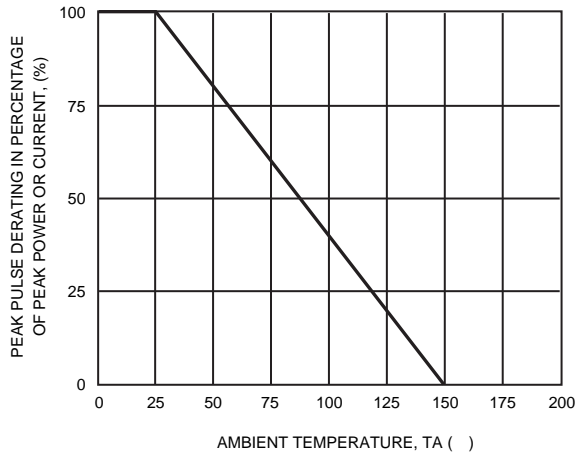


FIG. 2 - MAXIMUM NON-REPETITIVE

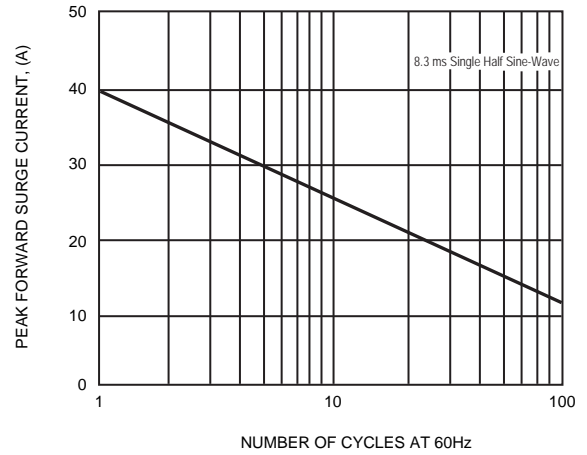


FIG. 3 - STEADY STATE POWER DERATING CURVE

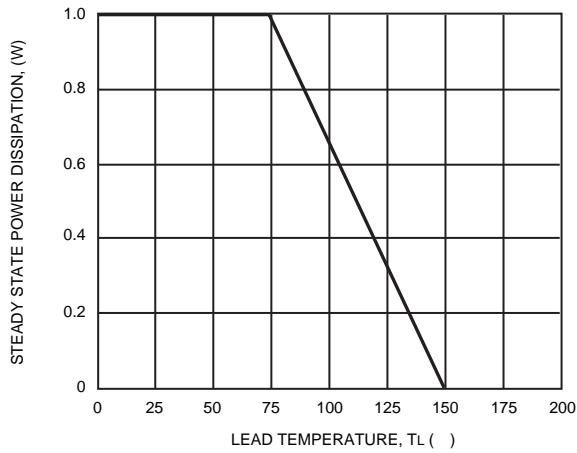


FIG. 4 - PEAK PULSE POWER RATING CURVE

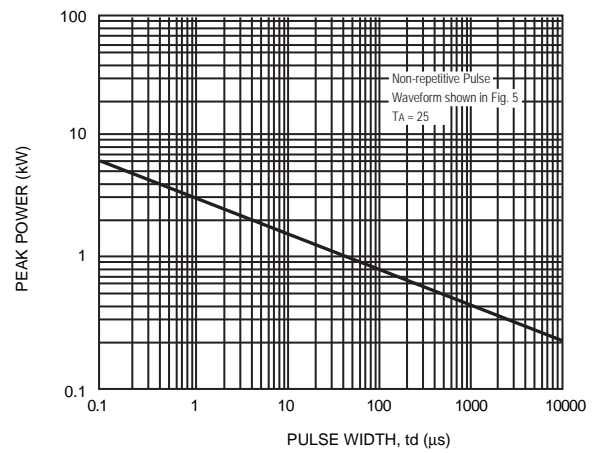


FIG. 5 - PULSE WAVEFORM

