

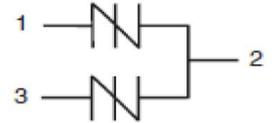
## Thyristor Surge Suppressors

### Description

P0080C2 Thyristor Surge Suppressors protect telecommunications equipment such as ADSL Modems, Router, Telephone, CCTV Camera, Digital Video Record, Video Capture Card, Twisted-pair video transmitter, CATV Splitter.....Etc.

P0080C2 Thyristor Surge Suppressors are used to enable equipment to meet various regulatory requirements including GR 1089, ITU K.20/21, IEC 61000-4-5, YD/T 1082, YD/T 993, YD/T 950, TIA-968-A, TIA-968-B

Schematic Symbol



### Features

Compared to surge suppression using other technologies, P0080C2 devices offer absolute surge protection regardless of the surge current available and the rate of applied voltage (dv/dt). P0080C2 devices:

- 100% Lead-Free (RoHS Compliant)
- Cannot be damaged by voltage
- Eliminate hysteresis and heat dissipation typically found with clamping devices
- Eliminate voltage overshoot caused by fast-rising transients
- Are non-degenerative
- Have low capacitance, making them ideal for high-speed transmission equipment



### Electrical Characteristics

Parameter	Definition
$V_{DRM}$	<b>Peak Off-state Voltage</b> — maximum voltage that can be applied while maintaining off state
$V_S$	<b>Switching Voltage</b> — maximum voltage prior to switching to on state
$I_H$	<b>Holding Current</b> — minimum current required to maintain on state
$I_S$	<b>Switching Current</b> — maximum current required to switch to on state
$I_T$	<b>On-state Current</b> — maximum rated continuous on-state current
$V_T$	<b>On-state Voltage</b> — maximum voltage measured at rated on-state current
Capacitance	<b>Off-state Capacitance</b> — typical capacitance measured in off state
$I_{DRM}$	<b>Leakage Current</b> — maximum peak off-state current measured at $V_{DRM}$
$I_{PP}$	<b>Peak Pulse Current</b> — maximum rated peak impulse current
$I_{TSM}$	<b>Peak One-cycle Surge Current</b> — maximum rated one-cycle AC current
di/dt	<b>Rate of Rise of Current</b> — maximum rated value of the acceptable rate of rise in current over time

## Electrical Characteristics

Part Number	Marking	$V_{DRM}$ @ $I_{DRM}=5 \mu$ A	$V_s$ @100V/ $\mu s$	$I_H$ Min	$I_s$ Max	$I_T$ Max	$V_T@I_T$ =2.2Am ps	Capacitance @1MHz,2V bias	IPP 10/700us	Delivery Time
		$V_{min}$	$V_{max}$	mA	mA	A	$V_{max}$	pF	V	Days
P0080C2	P008C2	6	25	50	800	2.2	4	120	6000	14days
P0300C2	P03C2	25	40	50	800	2.2	4	120	6000	14days
P0640C2	P06C2	58	77	50	800	2.2	4	120	6000	14days

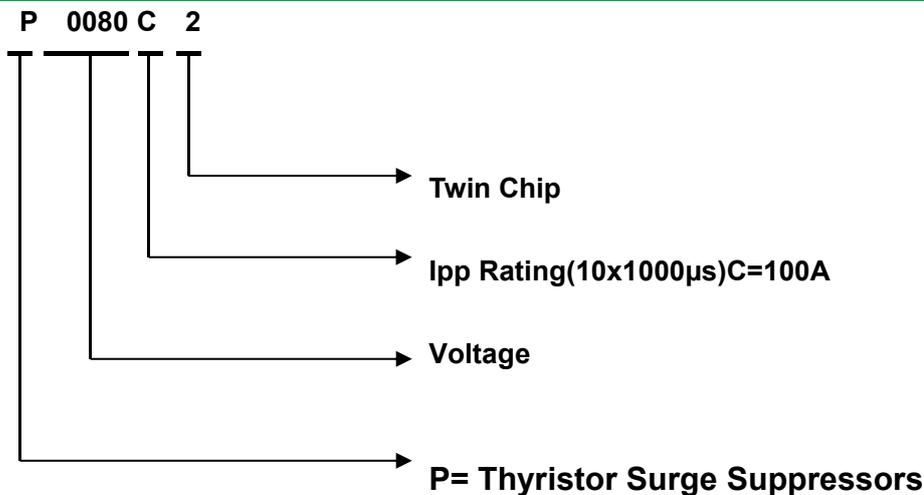
Notes:

- All measurements are made at an ambient temperature of 25°C .Ipp applies to -40°C through +85°C temperature range .
- Off-state capacitance(Co) is typical value.

Series	$I_{pp}$ 2x10 $\mu s$	$I_{pp}$ 8x20 $\mu s$	$I_{pp}$ 10x160 $\mu s$	$I_{pp}$ 10x1000 $\mu s$	$I_{pp}$ 5x320 $\mu s$	$I_{pp}$ 10x360 $\mu s$
	Amps	Amps	Amps	Amps	Amps	Amps
C	500	400	200	100	150	75

Package	DO-214AA/SMB	Symbol	Parameter	Value	Unit
		$T_J$	Operating Junction Temperature Range	-40 to +150	°C
		$T_s$	Storage Temperature Range	-65 to +150	°C
		$R_{\theta JA}$	Junction to Ambient on prited circuit	90	°C /W

## Description of Part Number



Specifications are subject to change without notice

2

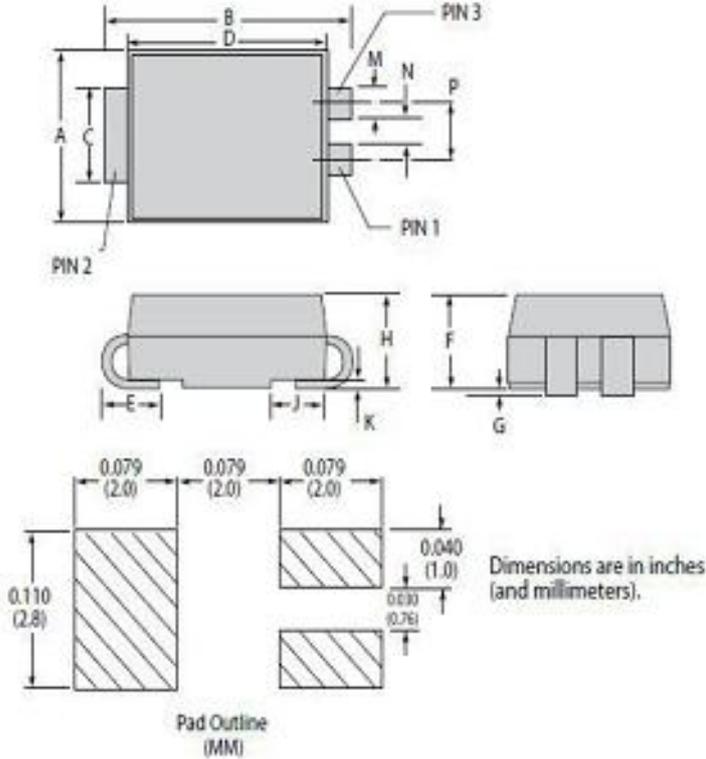
Tel: +86-755-27465585

HUAAN LIMITED

[www.huaandz.com](http://www.huaandz.com)

Email: [sales@huaandz.com](mailto:sales@huaandz.com)

Dimensions - DO-214AA / SMB



	Inches		Millimeters	
	Min	Max	Min	Max
A	0.130	0.155	3.30	3.94
B	0.201	0.22	5.10	5.60
C	0.077	0.083	1.95	2.11
D	0.166	0.185	4.22	4.70
E	0.030	0.063	0.75	1.60
F	0.075	0.103	1.90	2.55
G	0.002	0.008	0.05	0.20
H	0.077	0.104	1.95	2.65
M	0.018	0.028	0.46	0.71
K	0.008	0.014	0.20	0.35
N	0.018	0.028	0.46	0.71
P	0.036	0.058	0.92	1.47

Ratings And V-I Characteristics Curves (TA=25°C, unless otherwise noted)

FIG.1: tr × td pulse waveform

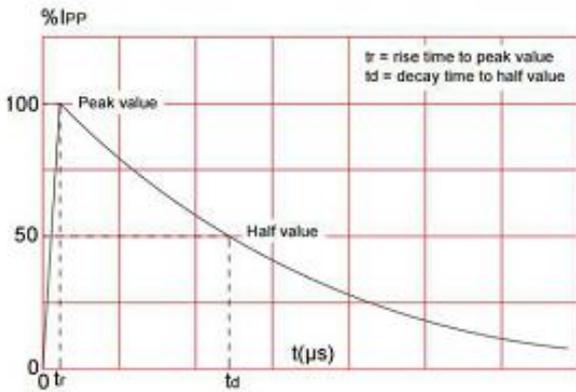
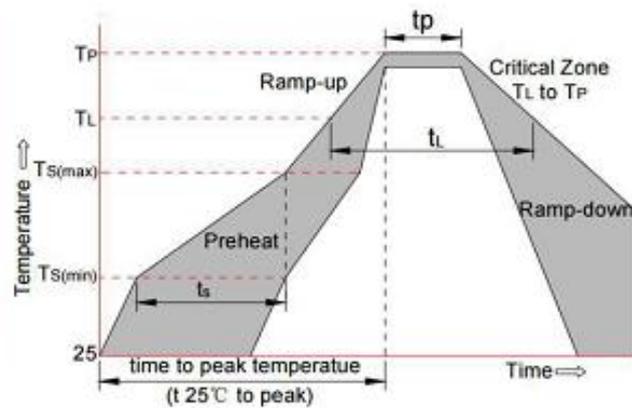


FIG.2: Reflow condition



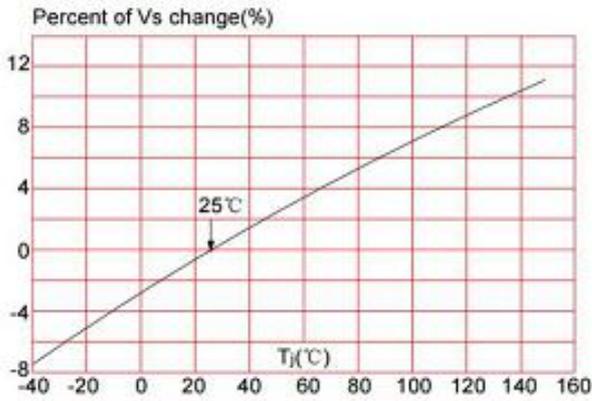
## Packing Options



Package Type	Description	Packing Quantity	Industry Standard
S	DO-214AA Reel Pack	3000 PCS	EIA-481-D

## Characteristics Curve

**FIG.3: Normalized Vs change vs. junction temperature**



**FIG.4: Normalized DC holding current vs. case temperature**

