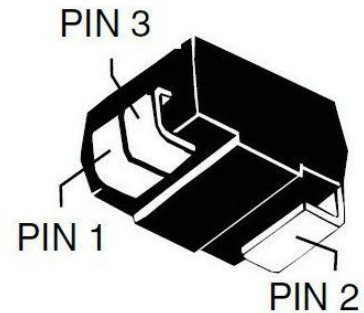


# Thyristor Surge Suppressors (TSS)

## P0640SC-2C

### Features

- ◆ Bi-directional.
- ◆ Excellent capability of absorbing transient surge.
- ◆ Quick response to surge voltage (ns level).
- ◆ Eliminates overvoltage caused by fast rising transients.
- ◆ Moisture sensitivity level:level 1.
- ◆ Non degenerative.
- ◆ Weight 93mg.
- ◆ SMB-3.

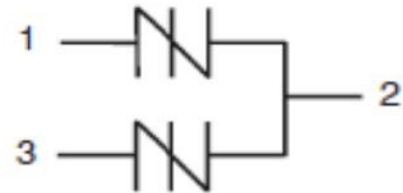


DO-214AA(SMB-3)

### Electrical Parameters(Tamb=25°C)

Symbol	Parameter
$V_{DRM}$	Stand-off voltage, is measured at $I_{DRM}$
$I_{DRM}$	Leakage current, is measured at $V_{DRM}$
$V_{BO}$	Break-over voltage, is measured at 100V/ $\mu$ s
$I_{BO}$	Break-over current
$I_H$	Holding current
$I_T$	On-state current
$V_T$	On-state voltage
$C_O$	Off-state capacitance is measured in $V_{DC}=2V@1MHZ$

### Schematic Symbol



### Electrical Characteristics (Tamb=25°C)

Part Number	$I_{DRM}@V_{DRM}$		$V_S@I_S$		$V_T@I_T$		$I_H$	$C_O$		$I_{PP}$
	Max.	Pin1,3-2	Pin1,3-2		Max.		Min.	Min.	Max.	Min.
	UA	V	V	mA	V	A	mA	pF	pF	
P0640SC-2C	5	58	77	800	4	2.2	120	40	200	100

#### General Notes:

- ◆ All measurements are made at an ambient temperature of 25°C.  $I_{PP}$  applies to -40°C through 85°C temperature range.
- ◆ Special voltage( $V_{BO}$  and  $V_{DRM}$ ) and holding current( $I_H$ ) requirements are available up on request.
- ◆ Off-state capacitance ( $C_O$ ) is measured at 1 MHz with a 2 V bias and is typical value.
- ◆ Rating Surge Voltage:100A(10/1000 $\mu$ s).

# Thyristor Surge Suppressors (TSS)

## P0640SC-2C

### Electrical Characteristics Curves

Figure 1. V-I Characteristics

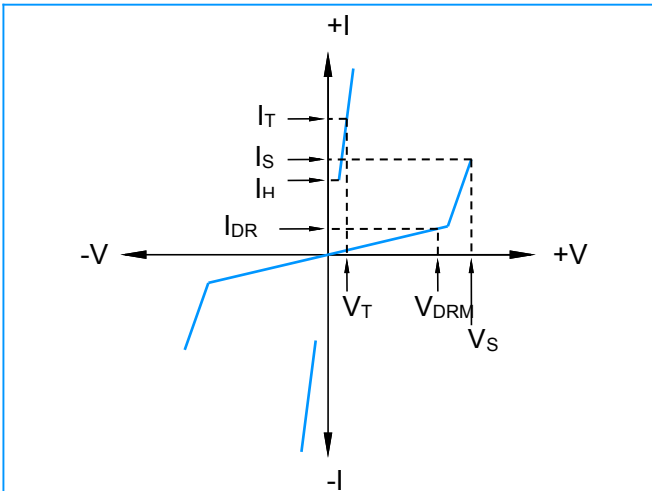


Figure 2.  $t_r \times t_d$  Pulse Waveform

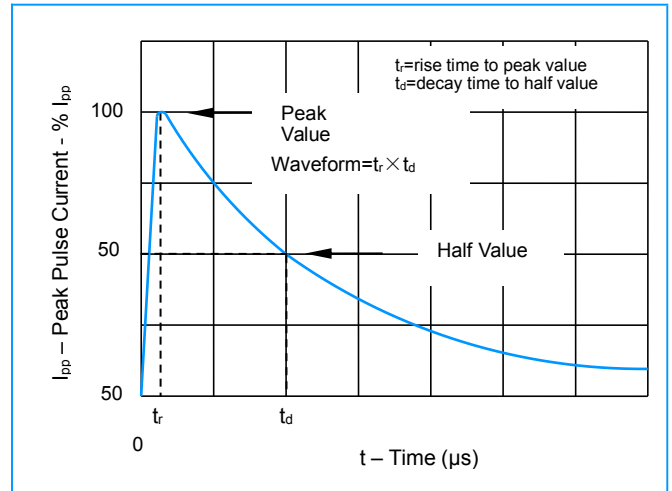
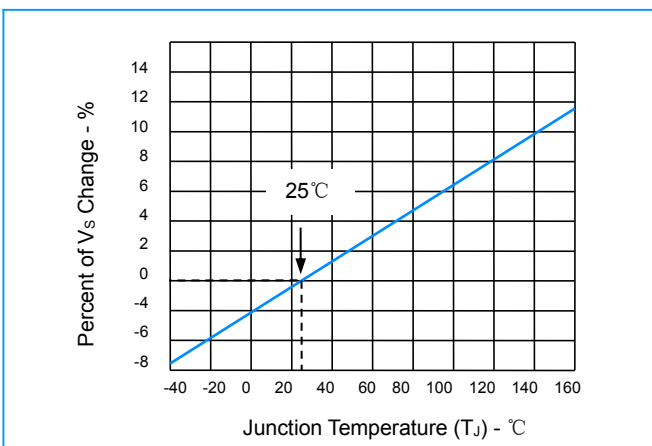
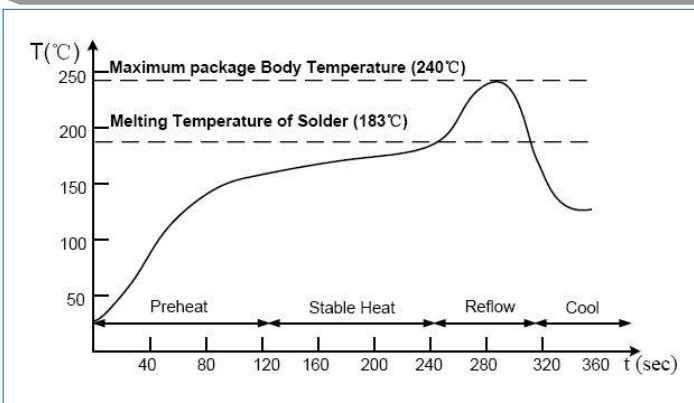


Figure 3. Normalized  $V_s$  Change versus Current



### Solder Reflow Recommendations



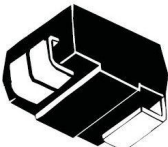
- ◆ Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- ◆ The device can be exposed to temperature of  $265^{\circ}C$  for 10 seconds.
- ◆ Devices can be cleaned using standard industry methods and solvents.

**Notes:** If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

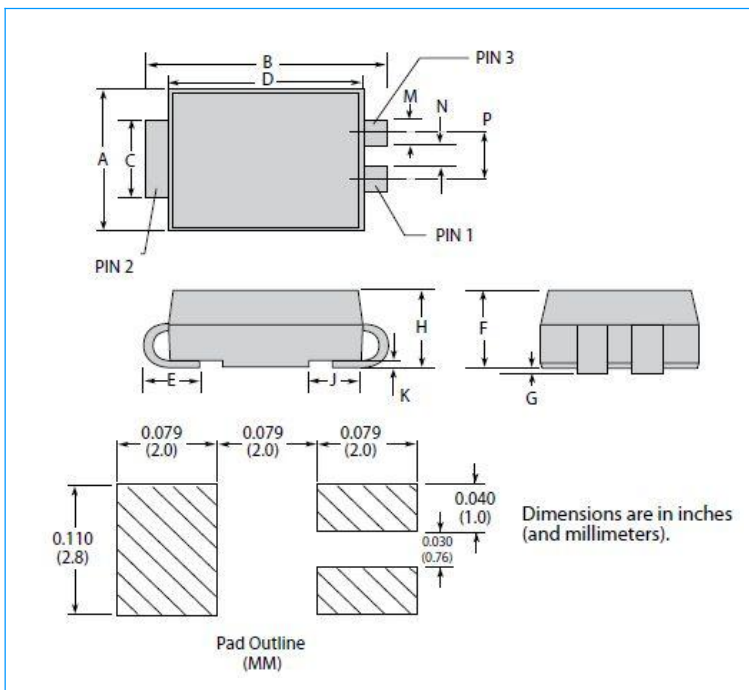
# Thyristor Surge Suppressors (TSS)

## P0640SC-2C

### Thermal Considerations

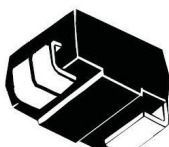
Package DO-214AA(SMB-3)	Symbol	Parameter	Value	Unit
	T <sub>J</sub>	Operating Junction Temperature Range	- 40 to + 150	°C
	T <sub>S</sub>	Storage Temperature Range	- 40 to +150	°C
	R <sub>θJA</sub>	Junction to Ambient on printed circuit	90	°C/W

### Product Dimensions



Dimension	Millimeters		Inches	
	Min	Max	Min	Max
<b>A</b>	3.30	3.94	0.130	0.155
<b>B</b>	5.10	5.60	0.201	0.220
<b>C</b>	1.95	2.11	0.077	0.083
<b>D</b>	4.22	4.70	0.166	0.185
<b>E</b>	0.75	1.60	0.030	0.063
<b>F</b>	1.90	2.45	0.075	0.096
<b>G</b>	0.05	0.20	0.002	0.008
<b>H</b>	1.95	2.40	0.077	0.094
<b>M</b>	0.15	0.41	0.006	0.016
<b>K</b>	0.20	0.35	0.008	0.014
<b>N</b>	0.69	0.084	0.027	0.033
<b>P</b>	1.32	1.47	0.052	0.058

### Summary of Packing Options

Package Type	Description	Packing Quantity	Industry Standard
<b>DO-214AA(SMB-3)</b> 	Modified DO-214AA 3-leaded Tape Reel Pack	3000PCS	EIA-481-D

# Thyristor Surge Suppressors (TSS)

## P0640SC-2C

### Tape and Reel Specification-Modified DO-214AA(SMB-3)

