

## SuperTSS –Thyristor Surge Suppressor

### 1. Features

- Excellent capability of absorbing transient surge
- Quick response to surge voltage (ns Level)
- Non degenerative
- Eliminates overvoltage caused by fast rising transients
- Bi-directional
- Rating Surge Voltage: 2KV (10/700μs)

### 2. Application Information

- RS485/232/422

### 3. Ordering Information

Part Number	Package	Marking	Material	Packing	Quantity per reel	Flammability Rating	Reel Size
ES0640SAS	SMB	64SAS /LOT	Halogen free	Tape & Reel	3,000 PCS	UL 94V-0	13 inches

Table-1 Ordering Information

### 4. Package information

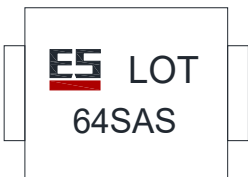

Outline	Circuit Diagram
	

Table-2 Package information

## 5. Part Number and Electrical Parameter

Absolute maximum ratings measured at  $T_A = 25^\circ\text{C}$  RH = 45%-75% (unless otherwise noted).

Part Number	$I_{\text{DRM}} @ V_{\text{DRM}}$		$V_S^{①} @ I_S$		$V_T @ I_T$		$I_H$		$C_o^{②}$
	$\mu\text{A}$	V	V	mA	V	A	mA		pF
	MAX		MAX		MAX		MIN	MAX	Typ.
ES0640SAS	5	58	77	800	4	2.2	125	350	35

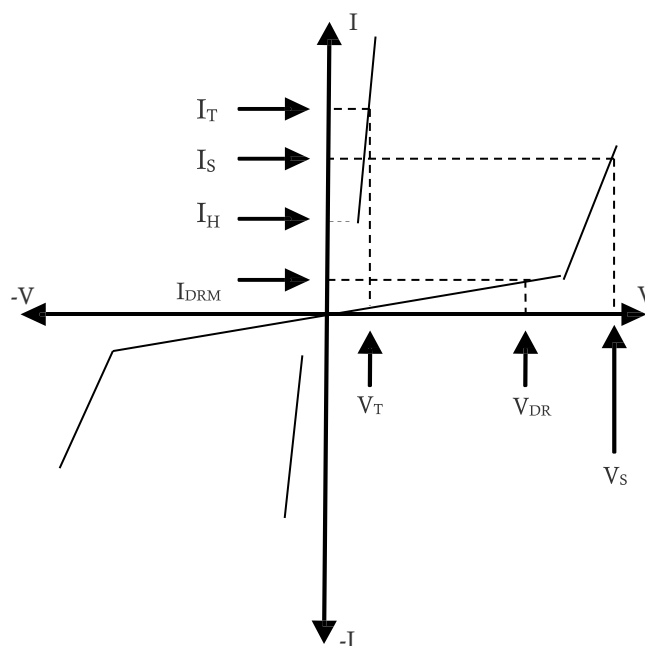
Table-3 Part Number and Electrical Parameter

NOT:

- ①  $V_S$  is measured at 100KV/S
- ② Off-state Capacitance is measured at  $V_{\text{DC}}=2\text{V}$ ,  $V_{\text{RMS}}=1\text{V}$ ,  $f=1\text{MHz}$

## 6. V-I Curve

Parameters	Definition
$V_{\text{DRM}}$	Peak Off-state Voltage
$I_{\text{DRM}}$	Off-state Current
$V_S$	Switching Voltage
$I_S$	Switching Current
$I_H$	Holding Current
$V_T$	On-state Voltage
$I_T$	On-state Current
$C_o$	Off-state Capacitance



## 7. Surge Ratings

Current Waveform	8/20 $\mu$ s	5/320 $\mu$ s	10/1000 $\mu$ s
Voltage Waveform	1.2/50 $\mu$ s	10/700 $\mu$ s	10/1000 $\mu$ s
I <sub>pp</sub>	150A	50A	45A

Table-4 Surge Ratings

-Peak pulse current rating (IPP) is repetitive and guaranteed for the life of the product;

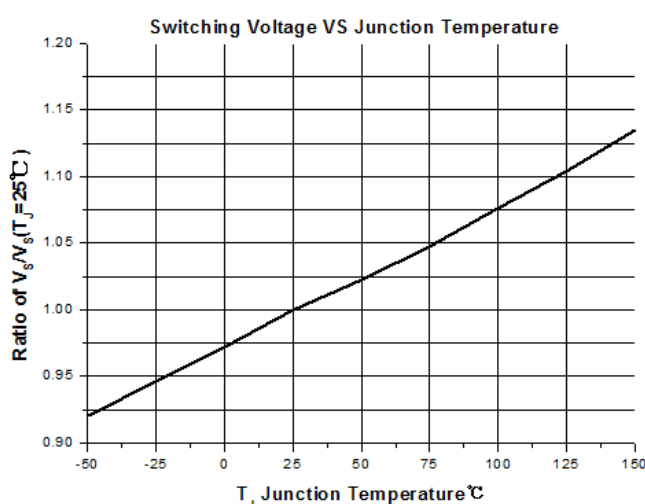
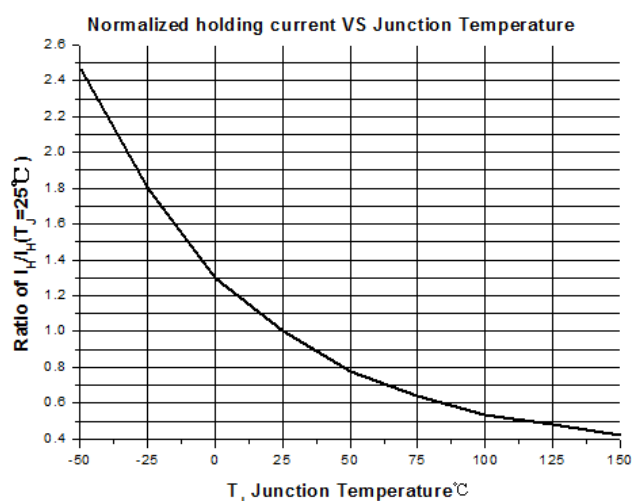
-Elecsuper only makes the test for 5/320 $\mu$ s@50A (10/700 $\mu$ s@2KV), but for other IPP value derived from experience is just for reference only. Elecsuper will not take any obligation for these parameters, so before applying our parts, please make sure to verify the parameters listed in the above table.

## 8. Thermal Considerations

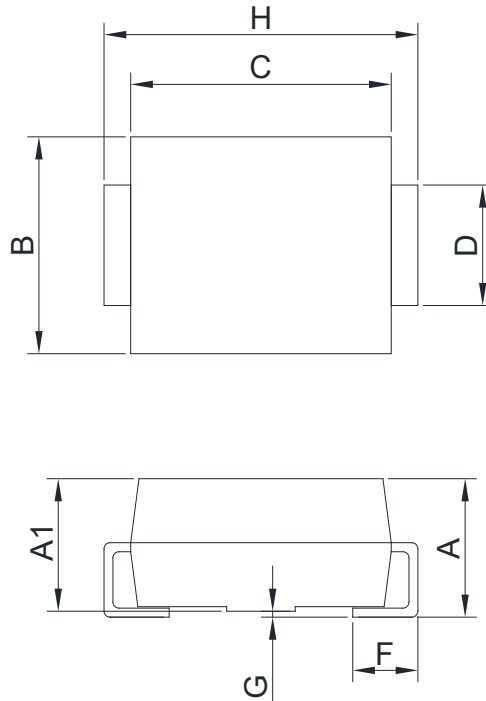
Symbol	Parameter	Value	Unit
T <sub>J</sub>	Operating Junction Temperature Range	-40 to +150	°C
T <sub>S</sub>	Storage Temperature Range	-55 to +150	°C

Table-5 Thermal Considerations

## 9. Typical Characteristics



## 10. Dimension (SMB)



REF	Millimeters		REF	Millimeters	
	MIN	MAX		MIN	MAX
A	2.15	2.45	D	1.90	2.10
A1	2.10	2.30	F	0.90	1.30
B	3.40	3.80	G	0.00	0.20
C	4.25	4.65	H	5.10	5.50

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