

# TWO TERMINAL THYRISTOR SERIES

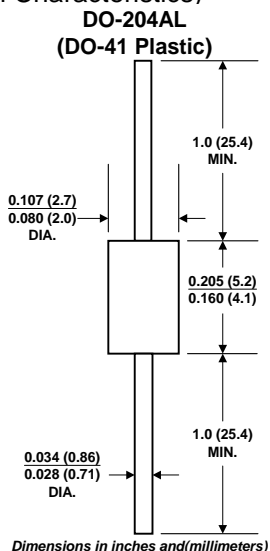
## SURFACE MOUNT SMA AND AXIAL LEAD DO-41

### TWO TERMINAL THYRISTOR (3T) SURGE SUPPRESSOR

#### FEATURES

UL94V-0 Flammability Classification  
 ESD Protection >40 kilovolts  
 Low Capacitance for T1/E1 Trunk and Line  
 Card Application  
 High Surge Current Capability  
 (See Electrical Characteristics)

Peak Off-State Voltage from 58 to 300 volts  
 Meet IEC61000-4-4 & -5 Industry Requirement  
 Provides Protection in Accordance with FCC Part 68  
 ,UL1459,Bellcore 1089,ITU-TK. 20 & K. 21



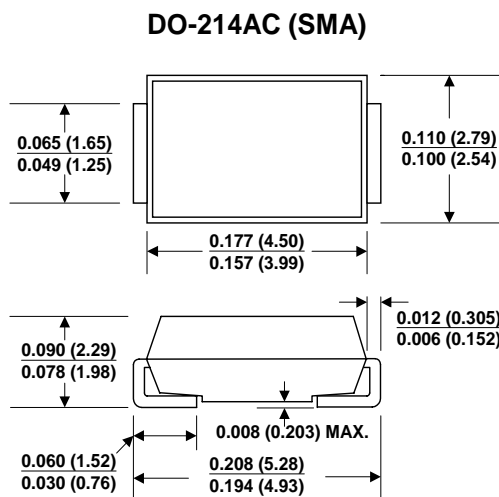
#### MECHANICAL DATA

**Case:** JEDEC DO-41 Molded plastic over passivated junction

**Terminals:** Tin Plated Axial leads, solderable per MIL-STD-750, Method 2026

**Mounting Position:** Any

**Weight:** 0.012 ounce, 0.3 gram



#### MECHANICAL DATA

**Case:** JEDEC DO214AC. Molded plastic over glass passivated junction

**Terminal:** Solder plated, solderable per MIL-STD-750 ,Method 2026

**Standard Packaging:** 12mm tape (EIA STD RS-481)

**Weight:** 0.002 ounce, 0.061 gram

3T PART NUMBER	MARKING CODE		REPETITIVE PEAK OFF-STAGE VOLTAGE $V_{DRM}$ VOLTS	SWITCHING VOLTAGE @100V/us $V_s$ VOLTS	MINIMUM HOLDING CURRENT $I_H$ mA	SWITCHING CURRENT $I_s$ mA	SURGE RATINGS IPP $10 \times 1000 \mu S$ Amps	ON-STAGE CURRENT $I_T$ A	MAXIMUM CAPACITANCE @50V,1MHz pF
	FOR AXIAL DO-41 PACKAGE	FOR SMA PACKAGE							
3T110AA	3T110AAL	G4	90	130	150	800	35	1	60
3T130AA	3T130AAL	G5	120	160	150	800	35	1	40
3T150AA	3T150AAL	G6	140	180	150	800	35	1	40
3T180AA	3T180AAL	G7	160	220	150	800	35	1	40
3T230AA	3T230AAL	G8	190	260	150	800	35	1	30
3T260AA	3T260AAL	G9	220	300	150	800	35	1	30
3T310AA	3T310AAL	GA	275	350	150	800	35	1	30
3T350AA	3T350AAL	GB	300	400	150	800	35	1	30
3T400AA	3T400AAL	FZ	360	450	150	800	35	1	30

**Maximum Off-State Current @ $V_{DRM}$  : 5 $\mu$ A**

**Maximum On-State Voltage @ $I_T$  : 5volts**

**For AXIAL devices,use suffix L (e.g. 3T310AAL) electrical charactics apply in both AXIAL and Surface Mounted Devices.**

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## RATINGS AND CHARACTERISTIC CURVES

(TA=25 unless otherwise noted)

Fig.1 Pulse Wave Form Example

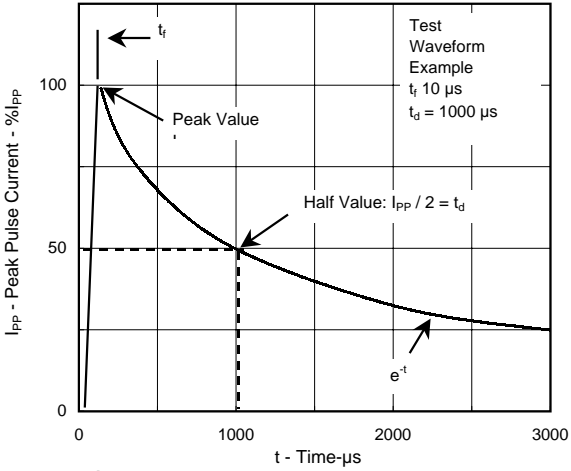


Fig.2

Typical Peak Off-State Current Vs Junction

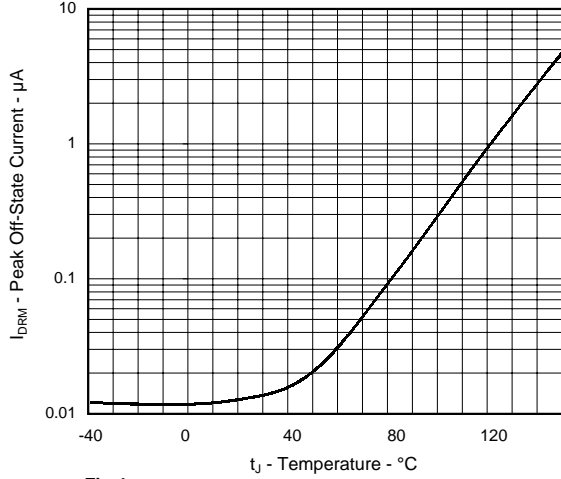


Fig.3

Typical On-State Current Vs On-State Voltage

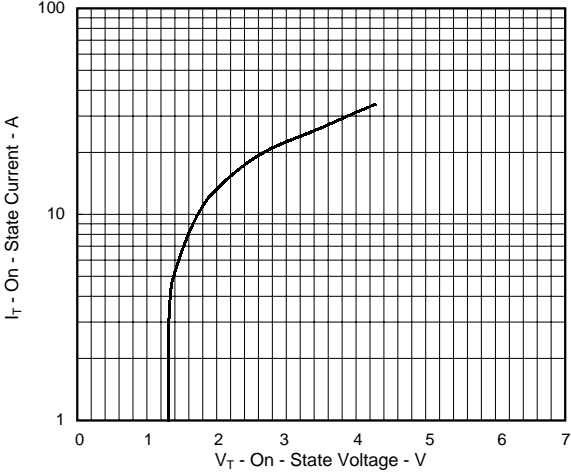


Fig.4

Typical Holding Current Vs Junction Temperature

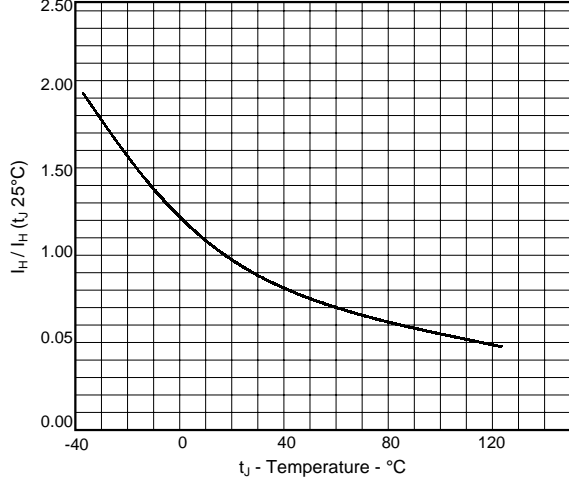


Fig.5

Typical normalized V\_S Vs Junction Temperature

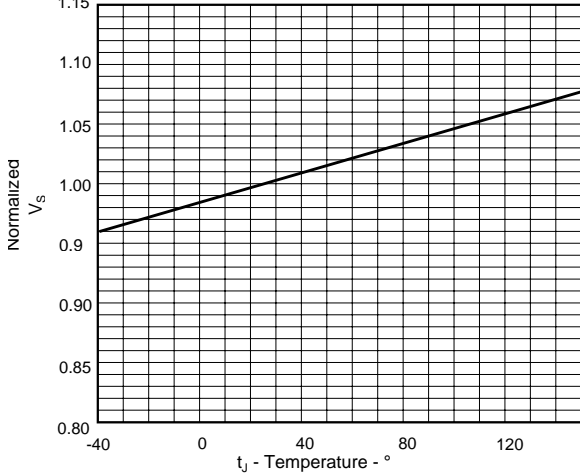


Fig.6 On-State Current Vs Surge Current

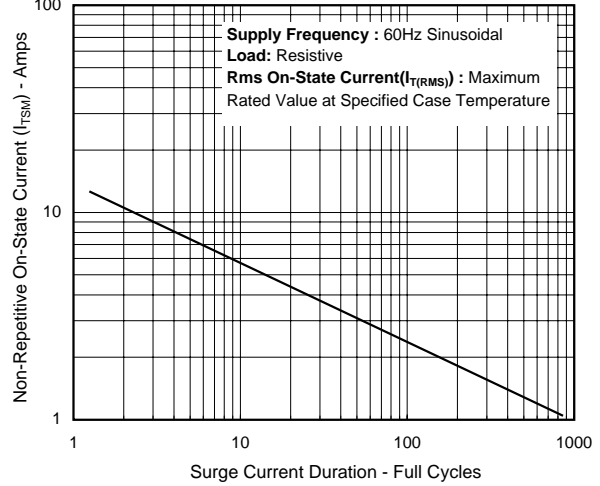
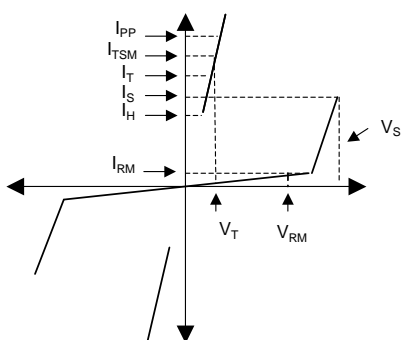


Fig.7 V - I Characteristics Curve



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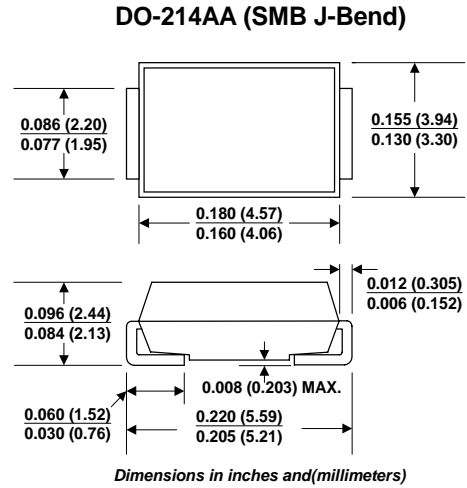
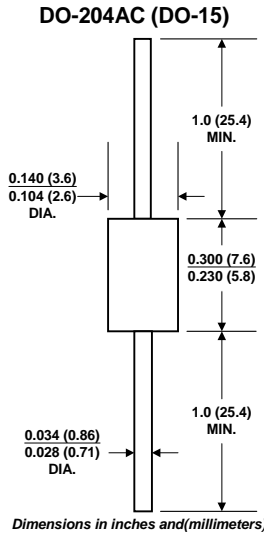
## SURFACE MOUNT SMB AND AXIAL LEAD DO-15

### TWO TERMINAL THYRISTOR (3T) SURGE SUPPRESSOR

#### FEATURES

UL94V-0 Flammability Classification  
 ESD Protection >40 kilovolts  
 Low Capacitance for T1/E1 Trunk and Line Card Application  
 High Surge Current Capability  
 (See Electrical Characteristics)

Peak Off-State Voltage from 58 to 300 volts  
 Meet IEC61000-4-4 & -5 Industry Requirement  
 Provides Protection in Accordance with FCC Part 68 ,UL1459,Bellcore 1089,ITU-TK. 20 & K. 21



#### MECHANICAL DATA

**Case:** JEDEC DO-15 Molded plastic over passivated junction

**Terminals:** Tin Plated Axial leads, solderable per MIL-STD-750, Method 2026

**Mounting Position:** Any

**Weight:** 0.015 ounce, 0.4 gram

#### MECHANICAL DATA

**Case:** JEDEC DO214AA. Molded plastic over glass passivated junction

**Terminal:** Solder plated, solderable per MIL-STD-750 ,Method 2026

**Standard Packaging:** 12mm tape (EIA STD RS-481)

**Weight:** 0.003 ounce, 0.093 gram

3T PART NUMBER	MARKING CODE		REPETITIVE PEAK OFF-STAGE VOLTAGE $V_{DRM}$ VOLTS	SWITCHING VOLTAGE @100V/us $V_s$ VOLTS	MINIMUM HOLDING CURRENT $dI/dt=1A/ms$ $I_H$ mA	SWITCHING CURRENT $I_s$ mA	SURGE RATINGS IPP $10*1000 \mu S$ Amps	ON-STAGE CURRENT $I_T$ A	MAXIMUM CAPACITANCE @50V,1MHz pF
	FOR AXIAL DO-15 PACKAGE	FOR SMB PACKAGE							
3T110AB	3T110ABL	D4	90	130	150	800	35	1	60
3T130AB	3T130ABL	D5	120	160	150	800	35	1	40
3T150AB	3T150ABL	D6	140	180	150	800	35	1	40
3T180AB	3T180ABL	D7	160	220	150	800	35	1	40
3T230AB	3T230ABL	D8	190	260	150	800	35	1	30
3T260AB	3T260ABL	D9	220	300	150	800	35	1	30
3T310AB	3T310ABL	DA	275	350	150	800	35	1	30
3T350AB	3T350ABL	DB	300	400	150	800	35	1	30
3T400AB	3T400ABL	DC	360	450	150	800	35	1	30
3T110A	3T110AL	GF	90	130	150	800	50	1	60
3T130A	3T130AL	GG	120	160	150	800	50	1	40
3T150A	3T150AL	GH	140	180	150	800	50	1	40
3T180A	3T180AL	GI	160	220	150	800	50	1	40
3T230A	3T230AL	GJ	190	260	150	800	50	1	30
3T260A	3T260AL	GK	220	300	150	800	50	1	30
3T310A	3T310AL	GL	275	350	150	800	50	1	30
3T350A	3T350AL	GM	300	400	150	800	50	1	30
3T400A	3T400AL	GO	360	450	150	800	50	1	30

**Maximum Off-State Current @ $V_{DRM}$  : 5 $\mu$ A**

**Maximum On-State Voltage @ $I_T$  : 5volts**

**For AXIAL devices,use suffix L (e.g. 3T310AL) electrical charactics apply in both AXIAL and Surface Mounted Devices.**

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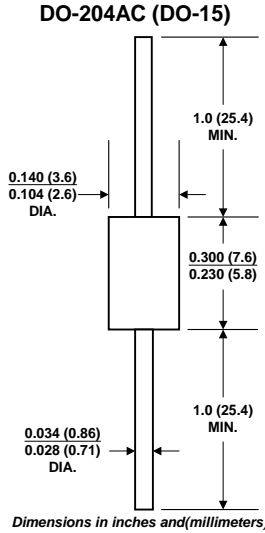
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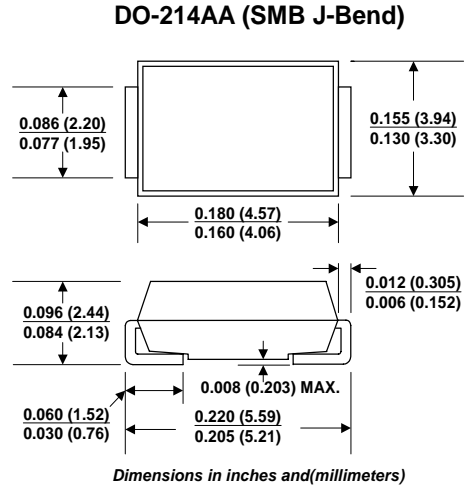
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**Case:** JEDEC DO-15 Molded plastic over passivated junction

**Terminals:** Tin Plated Axial leads, solderable per MIL-STD-750, Method 2026

**Mounting Position:** Any

**Weight:** 0.015 ounce, 0.4 gram



#### MECHANICAL DATA

**Case:** JEDEC DO214AA. Molded plastic over glass passivated junction

**Terminal:** Solder plated, solderable per MIL-STD-750 ,Method 2026

**Standard Packaging:** 12mm tape (EIA STD RS-481)

**Weight:** 0.003 ounce, 0.093 gram

3T PART NUMBER	MARKING CODE		REPETITIVE PEAK OFF-STAGE VOLTAGE $V_{DRM}$ VOLTS	SWITCHING VOLTAGE @100V/us $V_s$ VOLTS	MINIMUM HOLDING CURRENT $dI/dt=1A/ms$ $I_H$ mA	SWITCHING CURRENT $I_s$ mA	SURGE RATINGS IPP $10^*1000 \mu S$ Amps	ON-STAGE CURRENT $I_T$ A	MAXIMUM CAPACITANC E @50V,1MHz pF
	FOR AXIAL DO-15 PACKAGE	FOR SMB PACKAGE							
3T110B	3T110BL	GS	90	130	150	800	75	1	100
3T130B	3T130BL	GT	120	160	150	800	75	1	70
3T150B	3T150BL	GU	140	180	150	800	75	1	70
3T180B	3T180BL	GV	160	220	150	800	75	1	70
3T230B	3T230BL	GW	190	260	150	800	75	1	50
3T260B	3T260BL	GX	220	300	150	800	75	1	50
3T310B	3T310BL	GY	275	350	150	800	75	1	40
3T350B	3T350BL	GZ	300	400	150	800	75	1	40
3T400B	3T400BL	GN	360	400	150	800	75	1	40
3T110C	3T110CL	HF	90	130	150	800	100	1	100
3T130C	3T130CL	HG	120	160	150	800	100	1	70
3T150C	3T150CL	HH	140	180	150	800	100	1	70
3T180C	3T180CL	HI	160	220	150	800	100	1	70
3T230C	3T230CL	HJ	190	260	150	800	100	1	50
3T260C	3T260CL	HK	220	300	150	800	100	1	50
3T310C	3T310CL	HL	275	350	150	800	100	1	40
3T350C	3T350CL	HM	300	400	150	800	100	1	40
3T400C	3T400CL	HS	360	450	150	800	100	1	40

**Maximum Off-State Current @ $V_{DRM}$  : 5μA**

**Maximum On-State Voltage @ $I_T$  : 5volts**

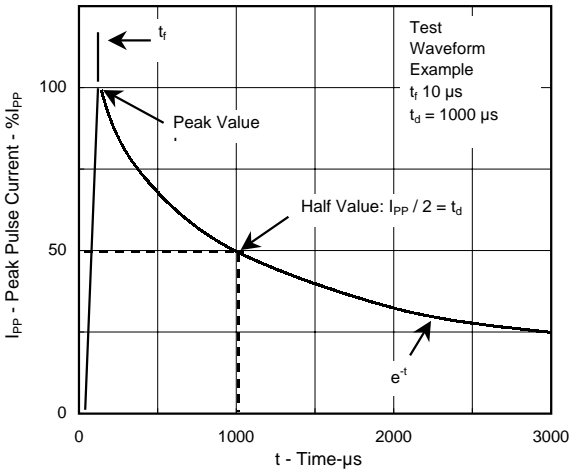
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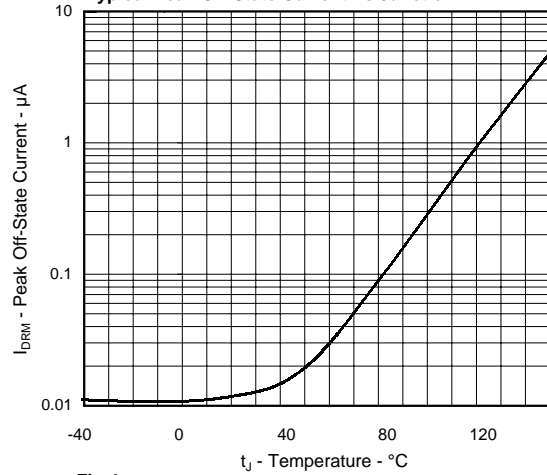
## RATINGS AND CHARACTERISTIC CURVES

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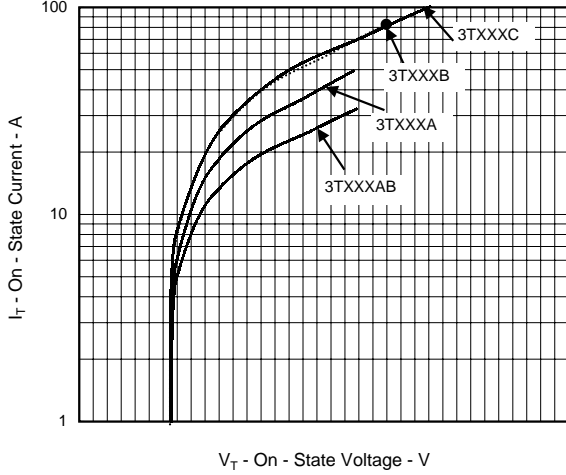
**Fig.1 Pulse Wave Form Example**



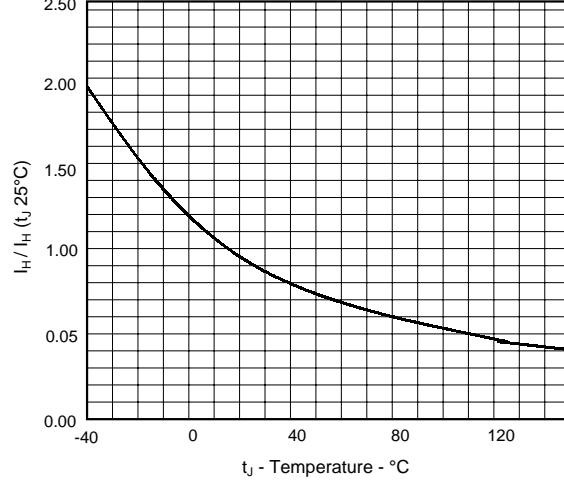
**Fig.2 Typical Peak Off-State Current Vs Junction**



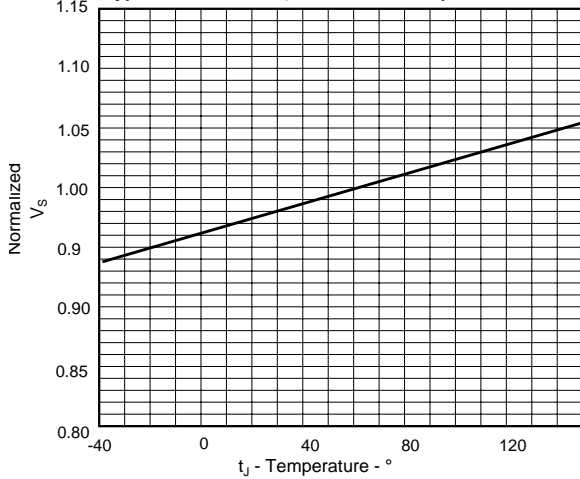
**Fig.3 Typical On-State Current Vs On-State Voltage**



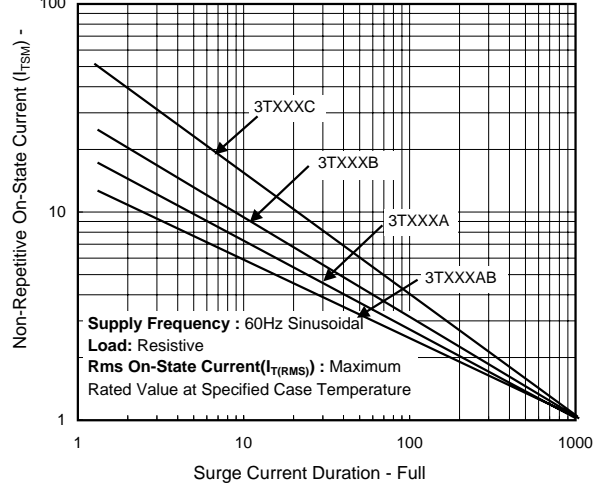
**Fig.4 Typical Holding Current Vs Junction Temperature**



**Fig.5 Typical normalized V\_S Vs Junction Temperature**



**Fig.6 On-State Current Vs Surge Current**



**Fig.7 V - I Characteristics Curve**

