

**SURFACE MOUNT
THYRISTOR SURGE PROTECTIVE DEVICE**

Bi-Directional

VDRM - **58 to 320** Volts
IPP - **100** Amperes

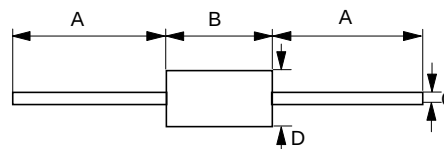
FEATURES

- Oxide Glass Passivated Junction
- Bidirectional protection in a single device
- Surge capabilities up to 100A @ 10/1000us or 400 @ 8/20us
- High off state Impedance and low on state voltage
- Plastic material has UL flammability classification 94V-0

MECHANICAL DATA

- Case : Molded plastic
- Polarity : Denotes none cathode band
- Weight : 0.093 grams

DO-201AD



DO-201AD		
Dim.	Min.	Max.
A	25.4	-
B	7.30	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in millimeter		

MAXIMUM RATINGS

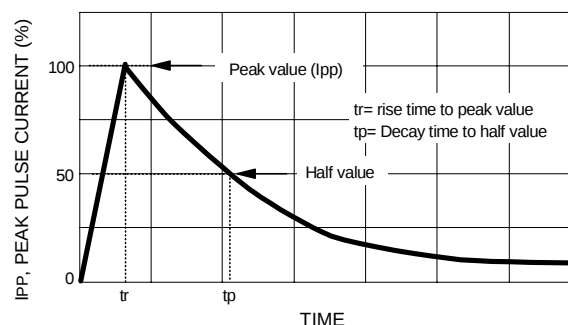
CHARACTERISTICS	SYMBOL	VALUE	UNIT
Non-repetitive peak impulse current @ 10/1000us	IPP	100	A
Non-repetitive peak On-state current @ 8.3ms (one half cycle)	ITSM	50	A
Junction temperature range	TJ	-40 to +150	°C
storage temperature range	TSTG	-55 to +150	°C

THERMAL RESISTANCE

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Junction to leads	Rth(J-L)	20	°C/W
Junction to ambient on print circuit (on recommended pad layout)	Rth(J-A)	100	°C/W
Typical positive temperature coefficient for brekdown voltage	$\Delta V_{BR}/\Delta T_J$	0.1	%/°C

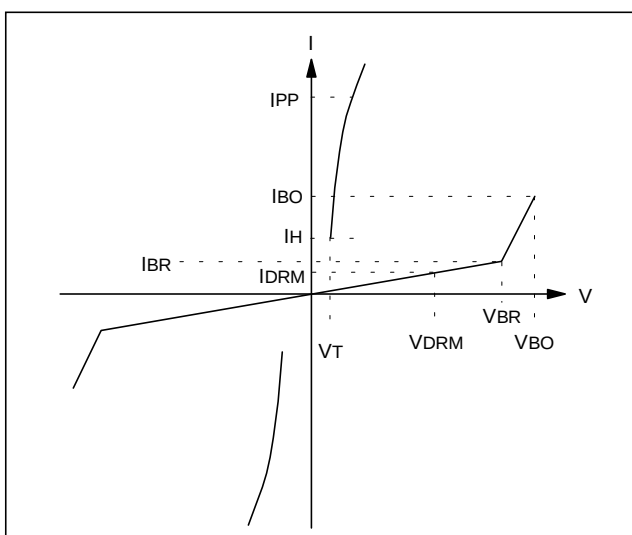
MAXIMUM RATED SURGE WAVEFORM

WAVEFORM	STANDARD	IPP (A)
2/10 us	GR-1089-CORE	500
8/20 us	IEC 61000-4-5	400
10/160 us	FCC Part 68	250
10/700 us	ITU-T K20/21	200
10/560 us	FCC Part 68	160
10/1000 us	GR-1089-CORE	100



PARAMETER	RATED REPETITIVE OFF-STATE VOLTAGE	OFF-STATE LEAKAGE CURRENT @ VDRM	BREAKOVER VOLTAGE	ON-STATE VOLTAGE @ IT=1.0A	BREAKOVER CURRENT		HOLDING CURRENT		OFF-STATE CAPACITANCE
SYMBOL	VDRM	IDRM	VBO	VT	IBO-	IBO+	IH-	IH+	Co
UNITS	Volts	uA	Volts	Volts	mA	mA	mA	mA	pF
LIMIT	Max	Max	Max	Max	Min	Max	Min	Max	Typ
TL0640H	58	5	77	3.5	50	800	150	800	200
TL0720H	65	5	88	3.5	50	800	150	800	200
TL0900H	75	5	98	3.5	50	800	150	800	200
TL1100H	90	5	130	3.5	50	800	150	800	120
TL1300H	120	5	160	3.5	50	800	150	800	120
TL1500H	140	5	180	3.5	50	800	150	800	120
TL1800H	160	5	220	3.5	50	800	150	800	120
TL2300H	190	5	265	3.5	50	800	150	800	80
TL2600H	220	5	300	3.5	50	800	150	800	80
TL3100H	275	5	350	3.5	50	800	150	800	80
TL3500H	320	5	400	3.5	50	800	150	800	80

SYMBOL	PARAMETER
VDRM	Stand-off Voltage
IDRM	Leakage current at stand-off voltage
VBR	Breakdown voltage
IBR	Breakdown current
VBO	Breakover voltage
IBO	Breakover current
IH	Holding current
VT	On state voltage
IPP	Peak pulse current
CO	Off state capacitance



REV. 0, 03-Dec-2001, KDWE01

NOTES: 1. $I_H > (V_L/R_L)$ If this criterion is not obeyed, the TSPD Triggers but does not return correctly to high-resistance state.
The Surge recovery time does not exceed 30ms.
2. Off-state capacitance measured at $f=1.0\text{MHz}$; $1.0V_{RMS}$ signal; $V_R=2V_{DC}$ bias.

FIG.1 - OFF STATE CURRENT vs JUNCTION TEMPERATURE **FIG. 2 - RELATIVE VARIATION OF BREAKDOWN VOLTAGE vs JUNCTION TEMPERATURE**

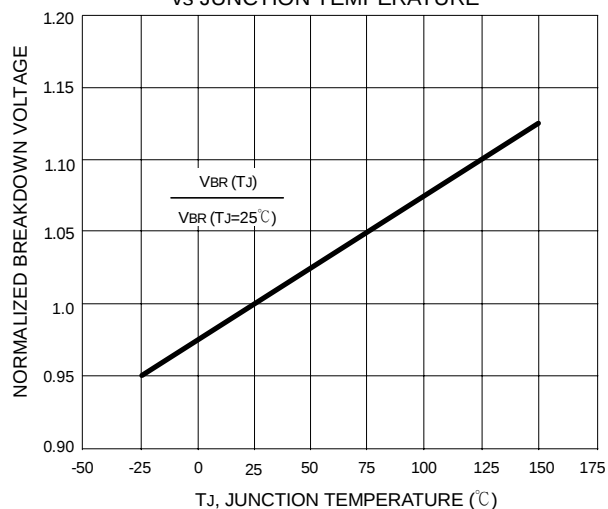
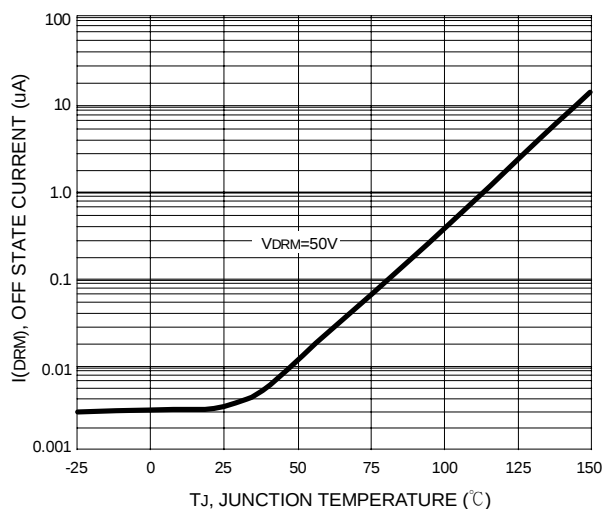


FIG. 3 - RELATIVE VARIATION OF BREAKOVER VOLTAGE vs JUNCTION TEMPERATURE

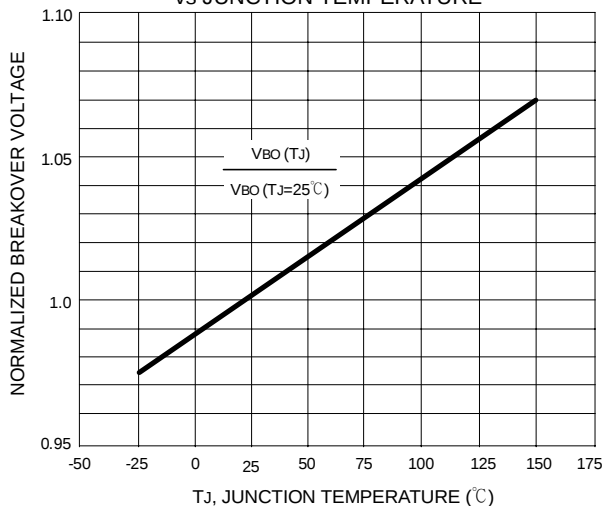


FIG. 4 - ON STATE CURRENT vs ON STATE VOLTAGE

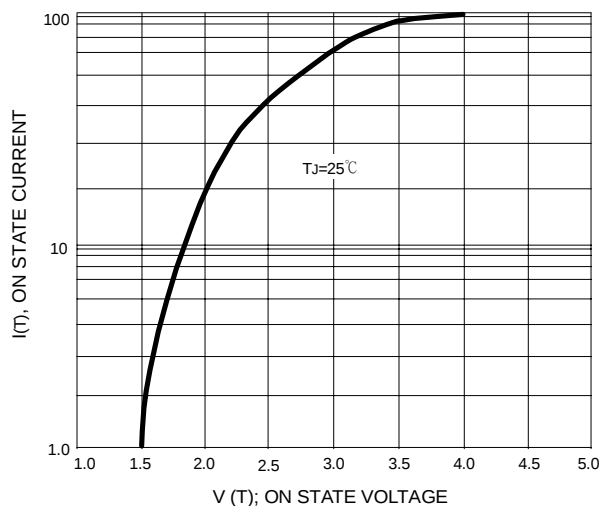


FIG. 5 - RELATIVE VARIATION OF HOLDING CURRENT vs JUNCTION TEMPERATURE

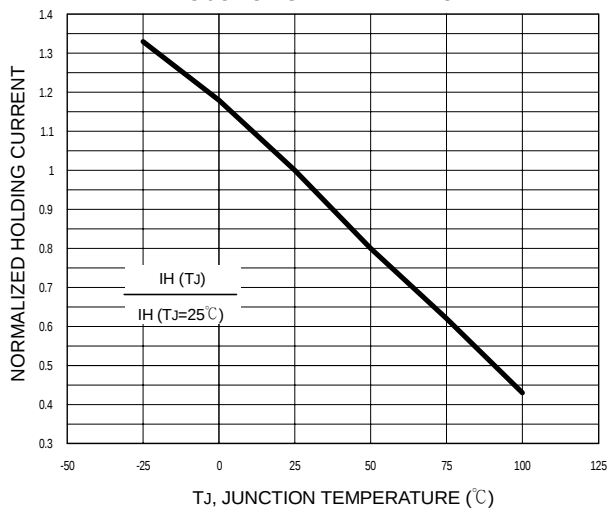
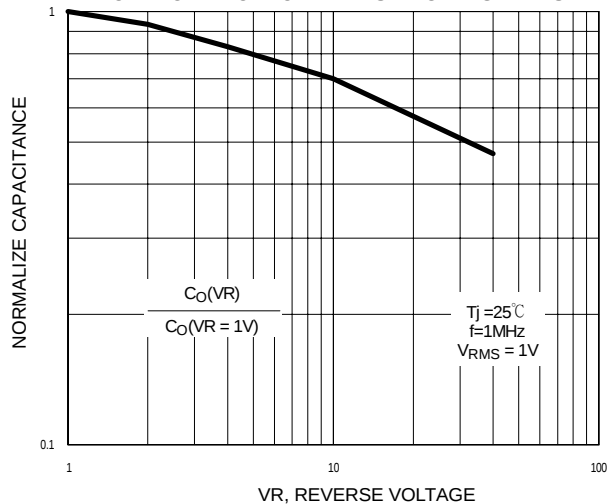
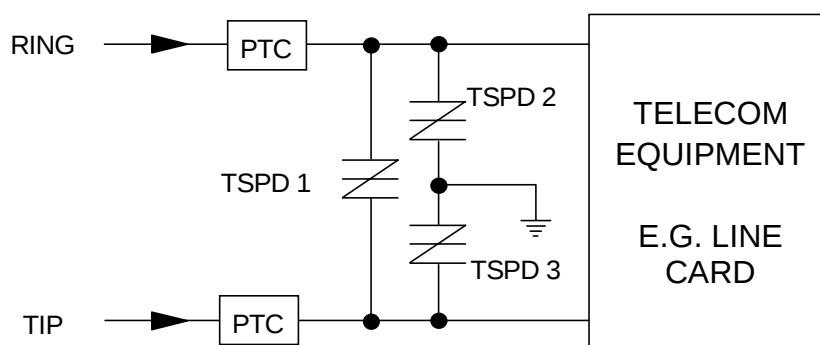
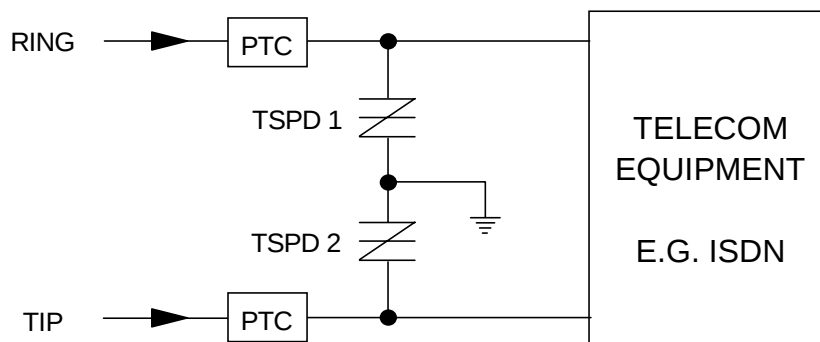
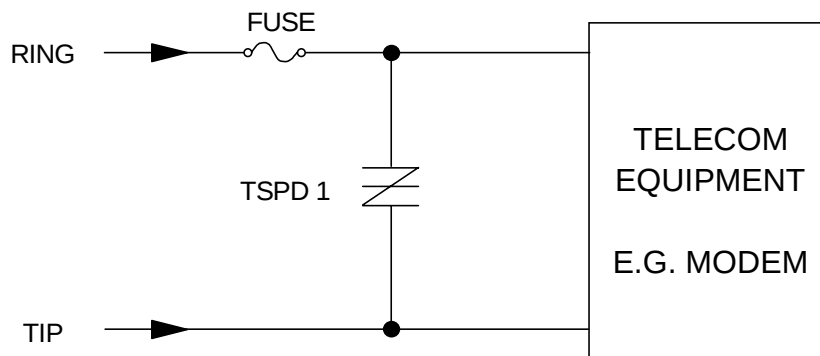


FIG. 6 - RELATIVE VARIATION OF JUNCTION CAPACITANCE vs REVERSE VOLTAGE BIAS





The PTC (Positive Temperature Coefficient) is an overcurrent protection device