TPA62 THRU TPA270

SOLID STATE TELECOMMUNICATION PROTECTION ARRESTOR

Breakdown Voltage - 62 to 270 Volts Holding Current - 150 Milliampere

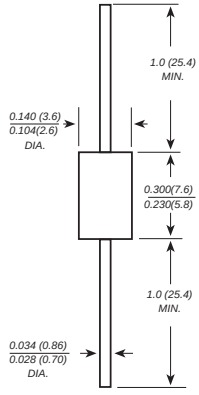
FEATURES

The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
Bidirectional crowbar protection
Fast response
High forward surge current capability
High temperature soldering guaranteed:
260℃/10 seconds,0.375"(9.5mm) lead length,
5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-15 molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Mounting Position: Any
Weight:0.014 ounce, 0.40 grams

DO-15



Dimensions in inches and (millimeters)

Complies with the following standards:	Peak surge voltage (V)	Voltage waveform (μs)	Current waveform (μs)	Admissible Ipp (A)	Necessary resistor (Ω)
(CCITT)ITU-K20	1000	10/700	5/310	25	--
(CCITT)ITU-K17	1500	10/700	5/310	38	--
VDE0433	2000	10/700	5/310	50	--
VDE0878	2000	1.2/50	1/20	50	--
IEC-1000-4-5	level 3 level4	10/700 1.2/50	5/310 8/20	50 100	-- --
FCC Part 68,lightning surge type A	1500 800	10/160 10/560	10/160 10/560	75 55	12.5 6.5
FCC Part 68,lightning surge type B	1000	9/720	5/320	25	--
BELLCORE TR-NWT-001089 First level	2500 1000	2/10 10/1000	2/10 10/1000	150 50	11.5 10
BELLCORE TR-NWT-001089 Second level	5000	2/10	1/20	150	11.5
CNET131-24	1000	0.5/700	0.8/310	25	--

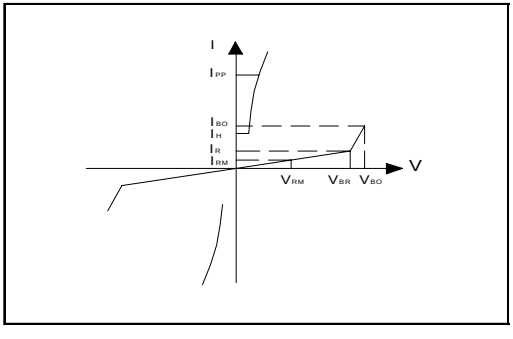
ABSOLUTE MAXIMUM RATINGS (T_A=25℃)

Symbol	Parameter		Value	Unit
P	Power dissipation on infinite heatsink	T_{amb}=50℃	1.7	W
Ipp	Peak pulse current	10/1000 μs 8/20 μs	50 100	A
I_{FSM}	Non repetitive surge peak on-state current	tp=20ms	30	A
I^2t	I^2t vallue for fusing	tp=20ms	9	A^2s
dV/dt	Critical rate of rise of off-state voltage	V_{RM}	5	KV/μs
T_{stg} T_j	Storage temperature range Maximum junction temperature		-55to+150 150	℃ ℃
T_L	Maximum leadtemperature for soldering during 10sat 5mmform case		230	℃

THERMAL RESISTANCES

Symbol	Parameter	Value	Unlt
R_{th}(j-l)	Junction to leads (L_{lead}=10mm)	60	℃/W
R_{th}(j-a)	Junction to ambient on printed circuit (L_{lead}=10mm)	100	℃/W

Type	I_{RM} @ V_{RM} max.		V_{BR} @ I_R min.		V_{BO} @ I_{BO} max. note1		I_H min. note2	C max. note3
	μA	V	V	mA	V	mA	mA	pF
TPA62	2	56	62	1.0	82	800	150	150
TPA68	2	61	68	1.0	90	800	150	150
TPA100	2	90	100	1.0	133	800	150	100
TPA120	2	108	120	1.0	160	800	150	100
TPA130	2	117	130	1.0	173	800	150	100
TPA180	2	162	180	1.0	240	800	150	100
TPA200	2	180	200	1.0	267	800	150	100
TPA220	2	198	220	1.0	293	800	150	100
TPA240	2	216	240	1.0	320	800	150	100
TPA270	2	243	270	1.0	360	800	150	100



Note2: See test circuit2.

ELECTRICAL CHARACTERISTICS (T_A=25℃)

Symbol	Parameter
V_{RM}	Stand-off voltage
I_{RM}	Leakage current at stand-off voltage
V_R	Continuous reverse voltage
V_{BR}	Breakdown voltage
V_{BO}	Breakover voltage
I_H	Holding current
I_{BO}	Breakover current
I_{PP}	Peak pulse current
C	Capacitance

Note1: Measured at 50Hz (1 cycle) See test circuit 1.
Note3: V_R=1V,F=1MHz, Refer to fig.3 for C versus V_R.

RATINGS AND CHARACTERISTIC CURVES TPA62 THRU TPA270

FIG.1 -- NON REPETITIVE SURGE PEAK ON-STATE CURRENT VERSUS OVERIOAD DURATION (T_J INItIAl=25°C).

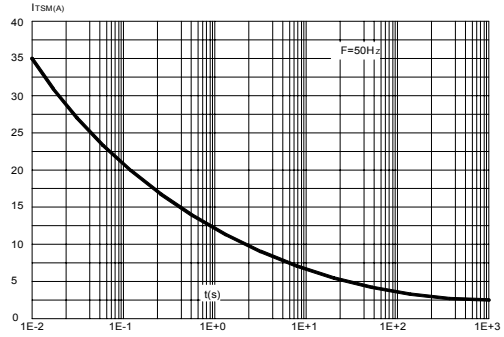


FIG.2 -- REIATIVE VARIATION OF GOIDING CURRENT VERSUS JUNCTION TEMPERATURE.

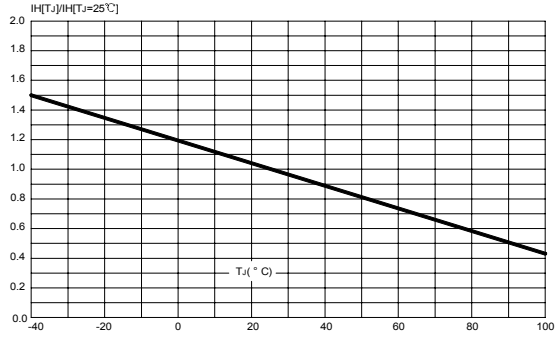


FIG.3 -- REIATIVE VARIATION OF JUNCTION CAPACITANCE VERSUS REVERSE APPLIED VOITAGE

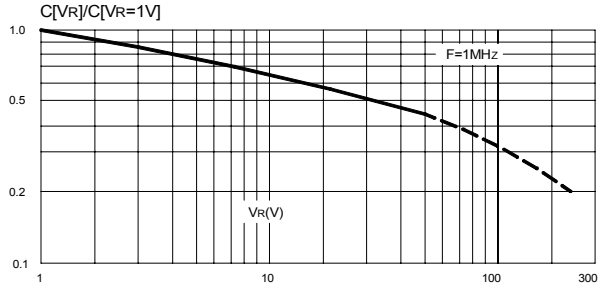


FIG.4 -- ON-STATE CURRENT VERSUS ON-STATE VOITAGE

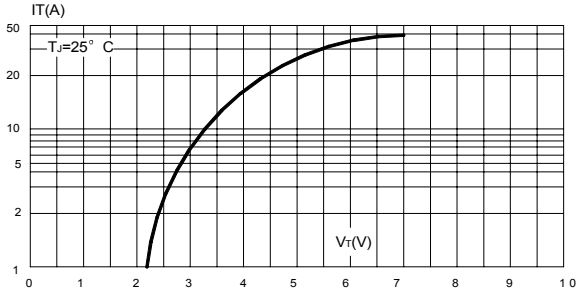


FIG.5 -- TRANSIENT THERMAl IMPEDANCE JUNCTION TO AMBIENT VERSUS PUISE DURATION