PG05TBUL2A

Single Line TVS Diode for ESD Protection in Portable Electronics

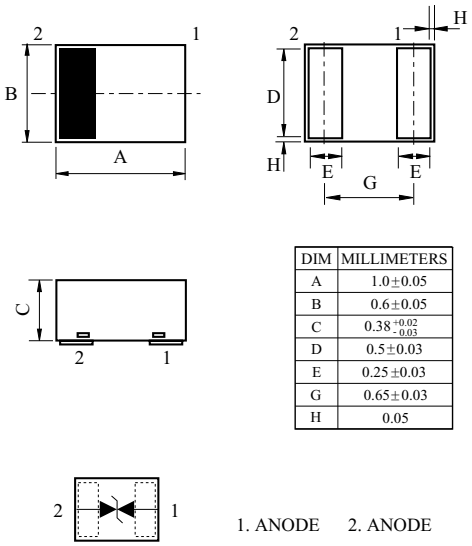
Protection in Portable Electronics Applications.

FEATURES

- Transient protection for data lines to
  IEC 61000-4-2(ESD) : ±8kV(contact), ±15kV(Air)
  IEC 61000-4-4(EFT) : 2.5kV/50A
  IEC 61000-4-5(Surge) 4A(tp=8/20 μs)
- Small package for use in portable electronics.
- Protects on I/O or power line.
- Low clamping voltage.
- Low leakage current.

APPLICATIONS

- USB 2.0, 10/100/1000 Ethernet, FireWire, DVI, HDMI, S-ATA
- Mobile Communication
- Consumer Products (STB, MP3, DVD, DSC...)
- LCD-Display, Camera
- Notebooks and desktop computers, peripherals

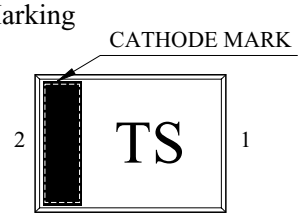


DIM	MILLIMETERS
A	1.0±0.05
B	0.6±0.05
C	$0.38^{+0.02}_{-0.03}$
D	0.5±0.03
E	0.25±0.03
G	0.65±0.03
H	0.05

1. ANODE 2. ANODE

ULP-2

Marking



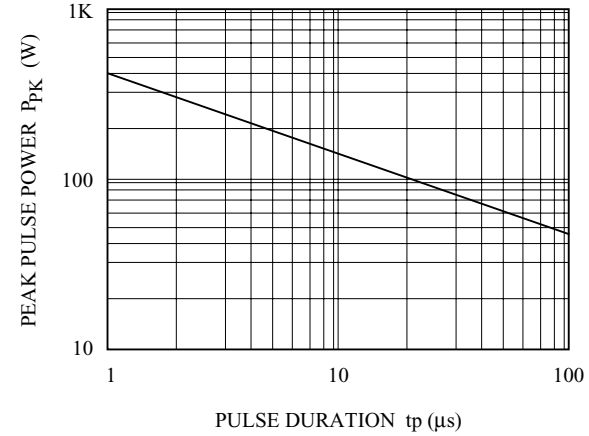
MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Peak Pulse Power (tp=8/20 μs)	P_{PK}	100	W
Peak Pulse Current (tp=8/20 μs)	I_{PP}	4	A
Junction Temperature	T_J	150	℃
Storage Temperature	T_{stg}	-55 150	℃

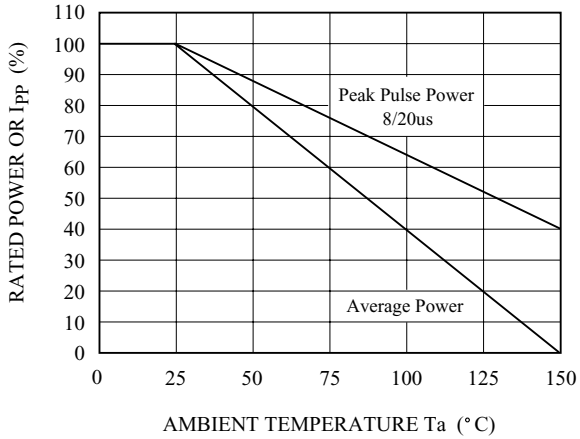
ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	I_t=1mA	7	8.8	10	V
Reverse Leakage Current	I_R	V_{RWM}=5V	-	10	100	nA
Clamping Voltage	V_C	I_{PP}=1A, tp=8/20us	-	13	20	V
		I_{PP}=4A, tp=8/20us	-	20	27	
Total Capacitance	C_J	V_R=0V, f=1MHz	-	0.45	0.6	pF

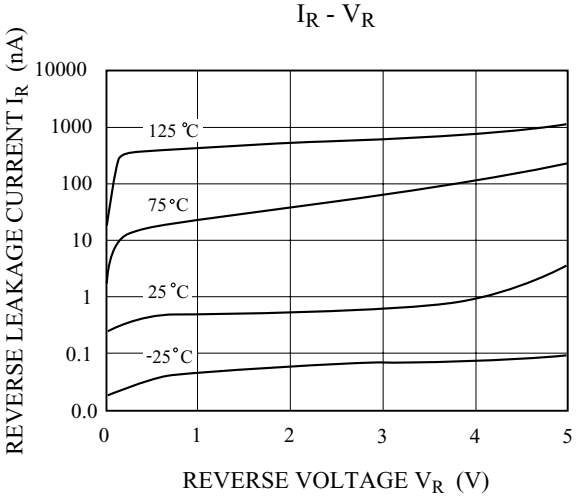
NON-REPETITIVE PEAK PULSE POWER VS. PULSE TIME



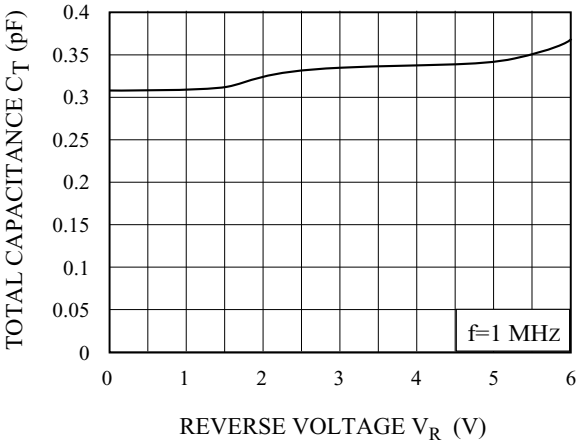
POWER DERATION CURVE



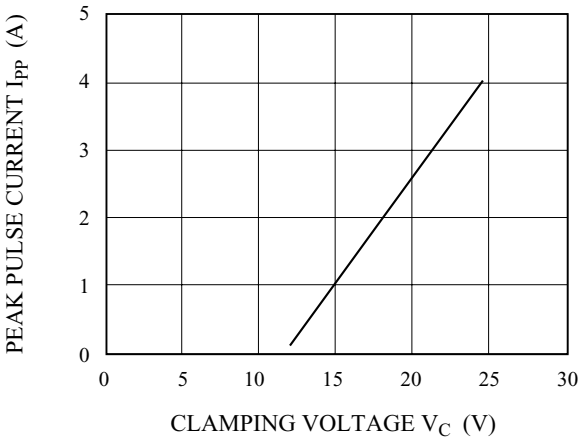
I_R - V_R



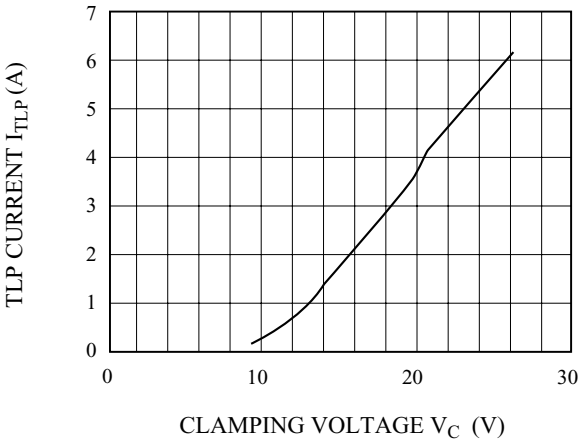
C_T - V_R



V_C - I_{PP}

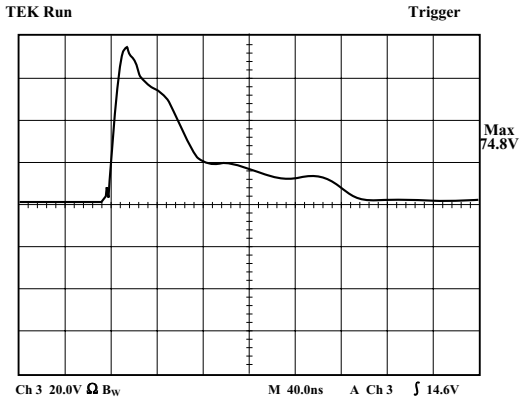


TLP CURVE



ESD Clamping

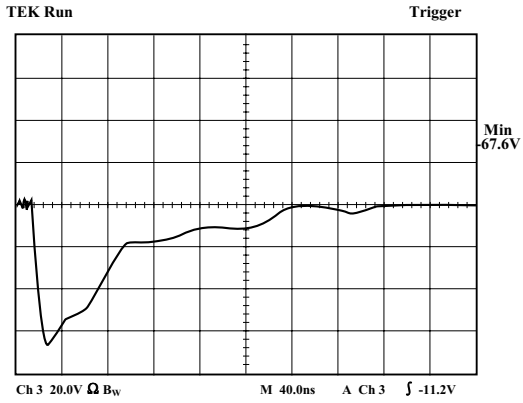
(+8 kV Contact per IEC 61000-4-2)



Note : Data is taken with a 10x attenuator

ESD Clamping

(-8 kV Contact per IEC 61000-4-2)



Note : Data is taken with a 10x attenuator

PULSE WAVEFORM