RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

TEP0701M

Low Capacitance TVS/ESD Protection Diode

DESCRIPTION

TEP0701M is a low-capacitance Transient Voltage Suppressor (TVS) designed to provide electrostatic discharge (ESD) protection for data, control or power lines. With maximum capacitance of 30pF only,TEP0701M is designed to protect parasitic-sensitive systems against over-voltage and over-current transient events. It complies with IEC 61000-4-2 (ESD), Level 4 (±15kV air, ±8kV contact discharge), very fast charged device model (CDM) ESD and cable discharge event (CDE), etc.

TEP0701M uses ultra-small DFN1006 package. Each TEP0701M device can protect one data line. It offers system designers flexibility to protect single data line where space is a premium concern..

ORDERING INFORMATION

- ✧Device:TEP0701M
- ✧Package: DFN1006
- ✧Marking: HOC
- ✧Material: Halogen free
- ✧Packing: Tape & Reel
- ✧Quantity per reel: 10,000pcs

FEATURES

- ✧Peak Power Dissipation 150 W (8/20μs)
- ✧Stand-off voltage:7V
- ✧Low capacitance 30pF(Maximum)
- ✧Replacement for MLV(0402)
- ✧Protects I/O Port
- ✧Low Clamping Voltage
- ✧Low Leakage
- ✧Low Capacitance
- ✧Response Time is <1ns
- ✧Meets MSL 1 Requirements
- ✧ROHS compliant
- ✧P/N suffix V means AEC-Q101 qualified, e.g:TEP0701MV

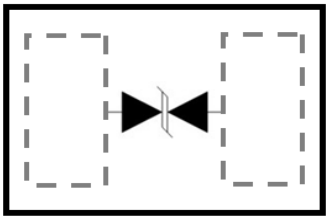
MACHANICAL DATA

- ✧DFN1006 package
- ✧Flammability Rating: UL 94V-0
- ✧Packaging: Tape and Reel
- ✧Reel size: 7 inch

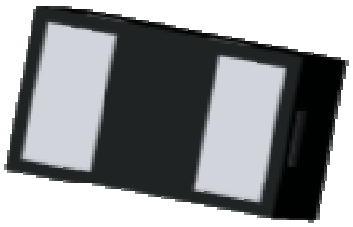
APPLICATIONS

- ✧Serial and Parallel Ports
- ✧Notebooks, Desktops, Servers
- ✧Projection TV
- ✧Cellular handsets and accessories
- ✧Portable instrumentation
- ✧Peripherals

PIN CONFIGURATION



PACKAGE OUTLINE



2019-11/01
REV:O

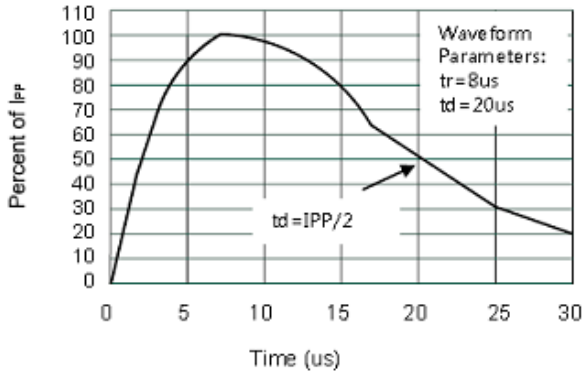
ABSOLUTE MAXIMUM RATING (Tamb=25°C, unless otherwise specified)

Symbol	Parameter	Value	Unit
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±25 ±25	kV
P_{PPP}	Peak Pulse Power(tp=8/20us waveform)	150	watts
T_L	Lead Soldering Temperature	260(10sec.)	°C
T_J	Operating Temperature Range	-55~125	°C
T_{STG}	Storage Temperature Range	-55~150	°C
T_L	Lead Solder Temperature-Maximum (10 Second Duration)	260	°C

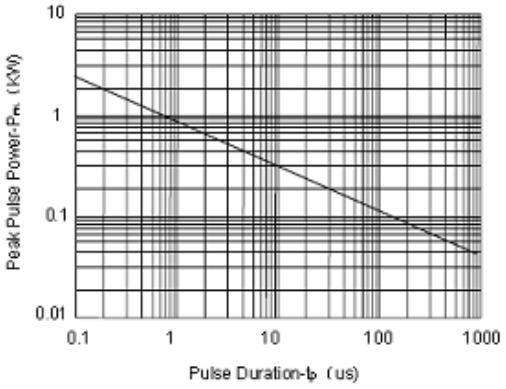
ELECTRICAL CHARACTERISTICS (Tamb=25°C,unless otherwise specified)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				7.0	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	7.5			V
I_R	Reverse Leakage Current	V_{RWM} = 7V			0.2	μA
V_C	Clamping Voltage	I_{PP} = 1A, t_p = 8/20μs			12	V
		I_{PP} = 8A, t_p = 8/20μs			19	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz		25	30	pF

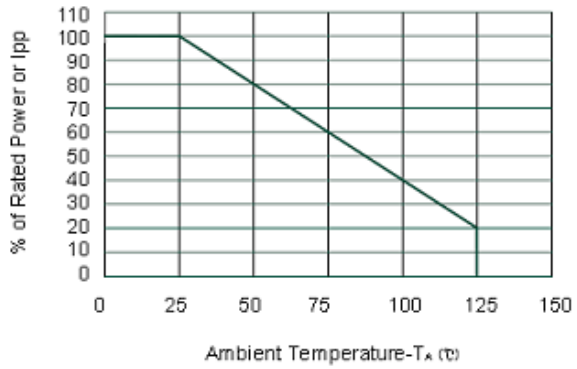
RATING AND CHARACTERISTICS CURVES (TEP0701M)



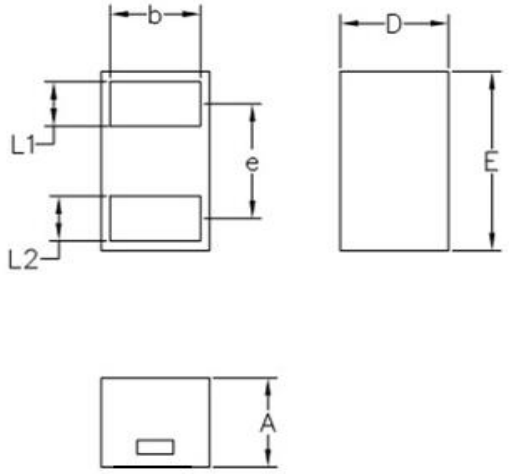
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time

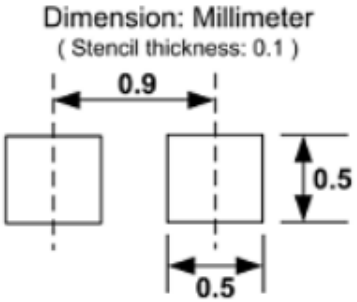


DFN1006 PACKAGE OUTLINE DIMENSIONS



NOTE:ALL DIMENSIONS IN MM

	MIN	NOM	MAX
D	0.55	0.60	0.65
E	0.95	1.00	1.05
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
A	0.45	0.50	0.55
b	0.45	0.50	0.55
e		0.64BSC	



Soldering Footprint

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