



CHENMKO ENTERPRISE CO.,LTD

Transient Voltage Suppressing Device

**TVSN512VCES
-01FGP-A**

Halogens free devices

APPLICATION

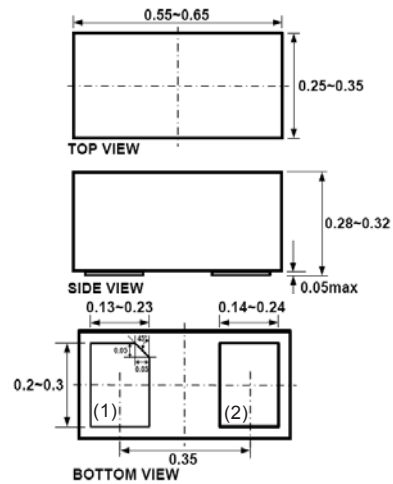
- * Mobile Phones
- * Hand Held Portable Applications
- * Computer Interfaces Protection
- * Microprocessors Protection
- * Serial and Parallel Ports Protection
- * Control Signal Lines Protection

FEATURES

- *ESD Protect for 1 Line with Bi-directional
- *IEC 61000-4-2 (ESD) $\pm 20\text{kV}$ (air), $\pm 20\text{kV}$ (contact)
- *IEC 61000-4-4 (EFT) 50A (5/50ns)
- *IEC 61000-4-5 (Lightning) 3A (8/20 μs)
- *Cable Discharge Event (CDE)

DFN0603

CIRCUIT



Dimensions in millimeters

DFN0603

SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS			
PARAMETER	SYMBOL	RATING	UNITS
Peak Pulse Current (tp=8/20 μs)	I_{PP}	3	A
Operating Supply Voltage	V_{DC}	± 13.2	V
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 20	kV
ESD per IEC 61000-4-2 (Contact)		± 20	
Lead Soldering Temperature	T_{SOL}	260 (10 sec.)	$^{\circ}\text{C}$
Operating Temperature	T_{OP}	-55 to +85	$^{\circ}\text{C}$
Storage Temperature	T_{STO}	-55 to +150	$^{\circ}\text{C}$

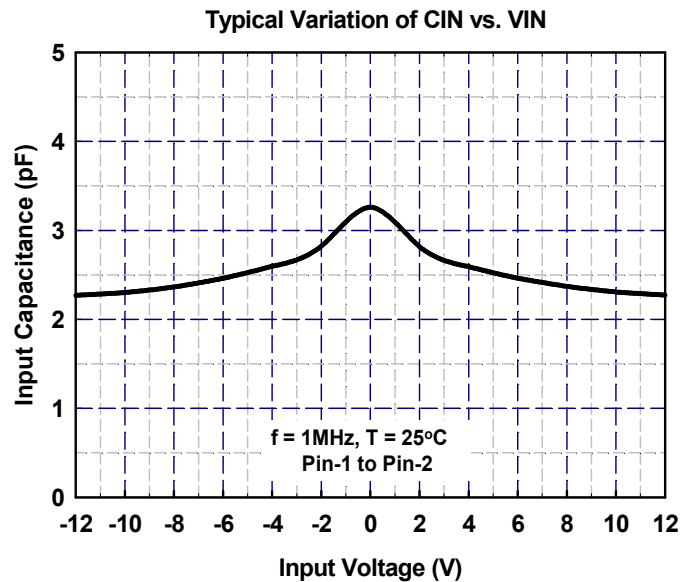
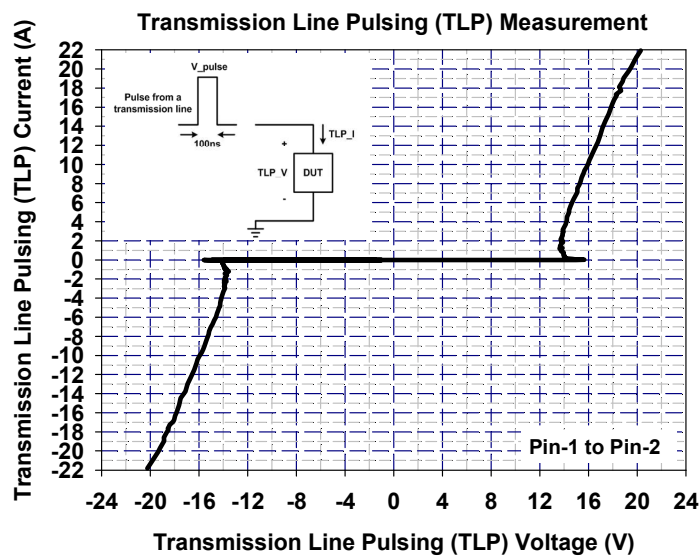
ELECTRICAL CHARACTERISTICS						
PARAMETER	SYMBOL	CONDITIONS	MINI	TYP	MAX	UNITS
Stand-Off Voltage	V_{RWM}	$T=25\text{ }^{\circ}\text{C}$	-12		12	V
Leakage Current	I_{Leak}	$V_{RWM} = \pm 12\text{V}$, $T=25\text{ }^{\circ}\text{C}$			0.5	μA
Breakdown Voltage	V_{BV}	$I_{BV} = 1\text{mA}$, $T=25\text{ }^{\circ}\text{C}$	13.5		16	V
ESD Clamping Voltage (Note 1)	V_{ESD_CL}	IEC 61000-4-2 +8kV ($I_{TLP} = 16\text{A}$), $T=25\text{ }^{\circ}\text{C}$, Contact mode		18		V
ESD Dynamic Turn-on Resistance	$R_{dynamic}$	IEC 61000-4-2, 0~+8kV, $T=25\text{ }^{\circ}\text{C}$, Contact mode		0.3		Ω
Channel Input Capacitance	C_{IN}	$V_R = 0\text{V}$, $f = 1\text{MHz}$, $T=25\text{ }^{\circ}\text{C}$		3.5		pF

Note 1: ESD Clamping Voltage was measured by Transmission Line Pulsing (TLP) System.

TLP conditions: $Z_0=50\Omega$, $t_p=100\text{ns}$, $t_r=2\text{ns}$.

RATING CHARACTERISTIC CURVES (TVSN512VCES-01FGP-A)

Typical Characteristics





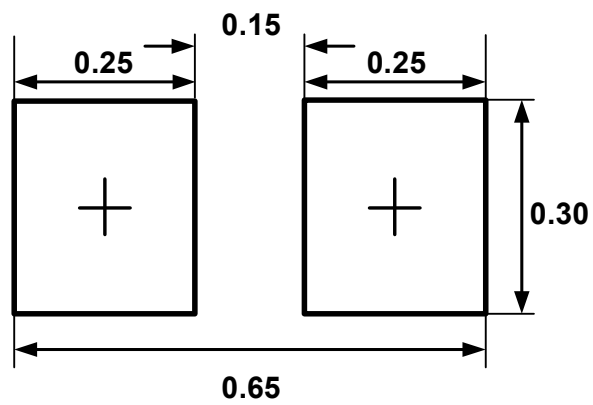
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SURFACE MOUNT

RECOMMENDED FOOT PRINT

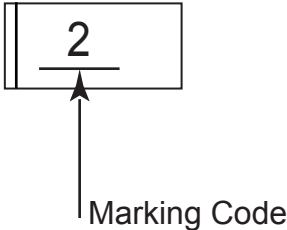
all dimensions in mm

DFN0603



The Marking and Part No. for TVSN512VCES-01FGP-A
(DFN0603)

Marking:



CUSTOMER :	APPROVED :	 CHENMKO LTD.
APPROVED :	CHECKED :	
CHECKED :	DRAWN :	
		DRAWING No. :