

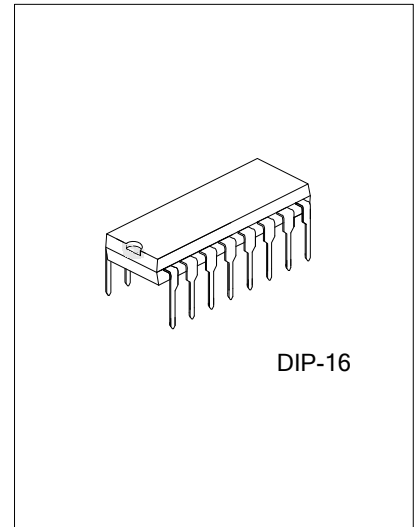
**USP720**

Preliminary

TVS**ELECTRONIC PROTECTION
ARRAY FOR ESD AND
OVER-VOLTAGE PROTECTION****■ DESCRIPTION**

The UTC **USP720** is an electronic protection array, it uses UTC's advanced technology to provide customers with high peak current capability, high switching speed, high ESD interface capability for HBM standards, low input leakage current and low input capacitance, etc.

The UTC **USP720** is suitable for ESD and OVP to sensitive input circuits.

**■ FEATURES**

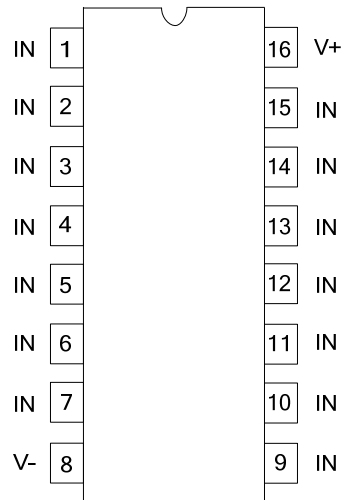
- * High peak current capability
- * High switching speed
- * High ESD interface capability for HBM standards
- * Low input leakage current
- * Low input capacitance

■ ORDERING INFORMATION

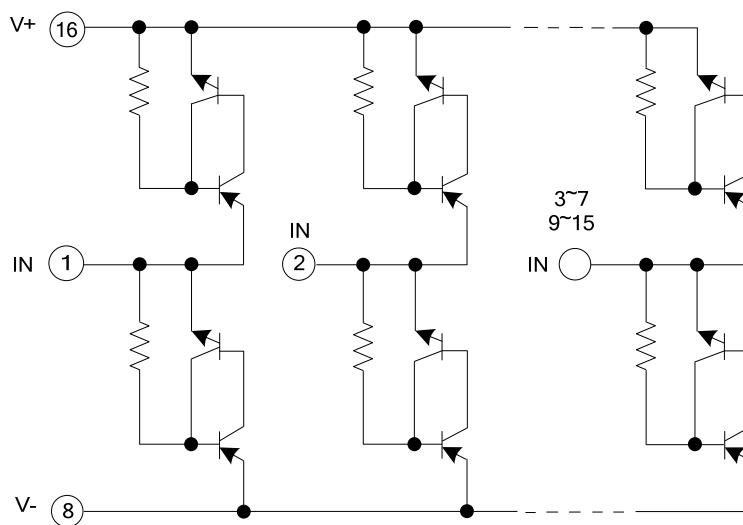
Ordering Number		Package	Packing
Lead Free	Halogen Free		
USP720L-D16-T	USP720G-D16-T	DIP-16	Tube

USP720G-D16-T (1) Packing Type (2) Package Type (3) Halogen Free	(1) T: Tube (2) D16 : DIP-16 (3) G: Halogen Free, L: Lead Free
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■ PIN CONFIGURATION



■ FUNCTIONAL BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
Continuous Supply Voltage, (V+) - (V-)	V_S	35	V
Forward Peak Current, I_{IN} to VCC, I_{IN} to GND	I_F	± 2	A
Storage Temperature	T_{STG}	-65~+150	°C
Operating Junction Temperature	T_J	150	°C
Load Dump and Reverse Battery (Note 2)			

Note: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. In automotive and battery operated systems, the power supply lines should be externally protected for load dump and reverse battery. When the V+ and V- pins are connected to the same supply voltage source as the device or control line under protection, a current limiting resistor should be connected in series between the external supply and the UTC USP720 supply pins to limit reverse battery current to within the rated maximum limits. Bypass capacitors of typically 0.01 μ F or larger from the V+ and V- pins to ground are recommended.

■ THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	90	°C/W

Notes: θ_{JA} is measured with the component mounted on an evaluation PC board in free air.

■ ELECTRICAL CHARACTERISTICS ($T_A = -40^{\circ}\text{C} \sim 105^{\circ}\text{C}$; $V_{IN} = 0.5V_{CC}$, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating Voltage Range, $V_{SUPPLY} = [(V+) - (V-)]$	V_{SUPPLY}		2		30	V
Forward Voltage Drop:	IN to V- V_{FWDL}	$I_{IN} = 1\text{A}$ (Peak Pulse)		2		V
	IN to V+ V_{FWDH}			2		V
Input Leakage Current	I_{IN}		-20	5	20	nA
Quiescent Supply Current	$I_{QUIESCENT}$			50	200	nA
Equivalent SCR ON Threshold				1.1		V
Equivalent SCR ON Resistance		V_{FWD}/I_{FWD}		1		Ω
Input Capacitance	C_{IN}			3		pF
Input Switching Speed	t_{ON}			2		ns

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