

Features

- Low capacitance: 12pF
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- Up to 6 lines protects
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 15\text{kV}$
 - Contact discharge: $\pm 8\text{kV}$
- RoHS Compliant

Mechanical Characteristics

- Package: MSOP-8
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Pb-Free, Halogen Free, RoHS/WEEE Compliant

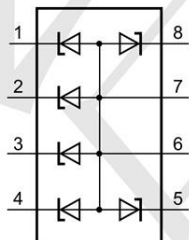
Applications

- Computers and peripherals
- Communication systems
- Audio and video equipment
- High speed data lines
- Parallel ports

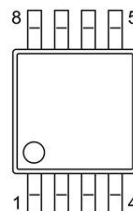
Ordering Information

Part Number	Qty per Reel	Reel Size
TPE05F6M8	2500	13"

Circuit Diagram



Pin Configuration



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	30	W
Peak Pulse Current (8/20 μs)	I _{PP}	2.2	A
ESD per IEC 61000-4-2 (Air)	VESD	± 15	kV
ESD per IEC 61000-4-2 (Contact)		± 8	
Operating Temperature Range	T _J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T _{stg}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			5	V	
Breakdown Voltage	V _{BR}	6			V	I _T = 1mA, any I/O to GND
Reverse Leakage Current	I _R			0.02	μA	V _{RWM} = 5V
Clamping Voltage	V _C			11	V	I _{PP} = 1A (8 x 20 μs pulse)
Clamping Voltage	V _C			14	V	I _{PP} = 2A (8 x 20 μs pulse)
Junction Capacitance	C _J			12	pF	V _R = 0V, f = 1MHz, any I/O to GND

PROTECTION PRODUCTS
Typical characteristics

Fig1. 8/20 μ s Pulse Waveform

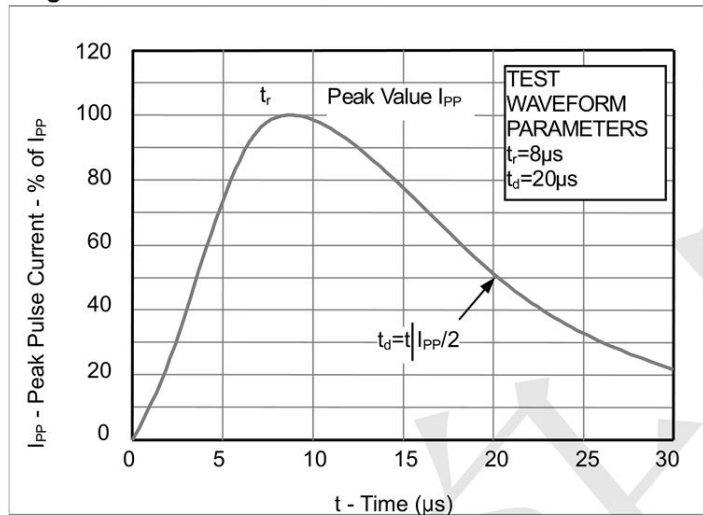


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

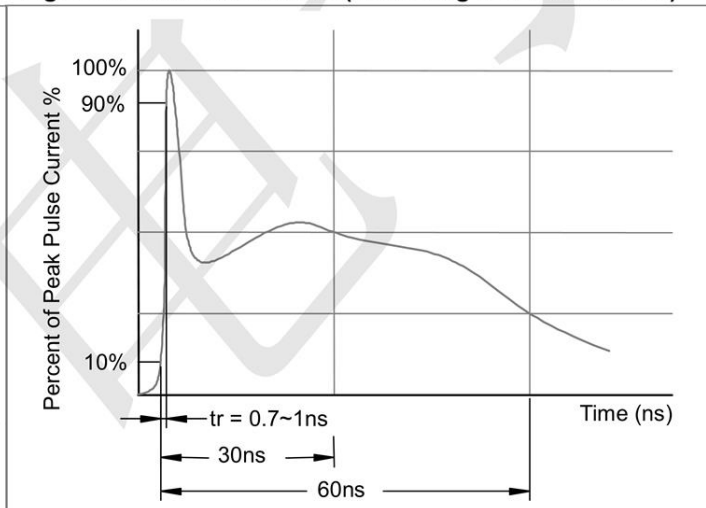
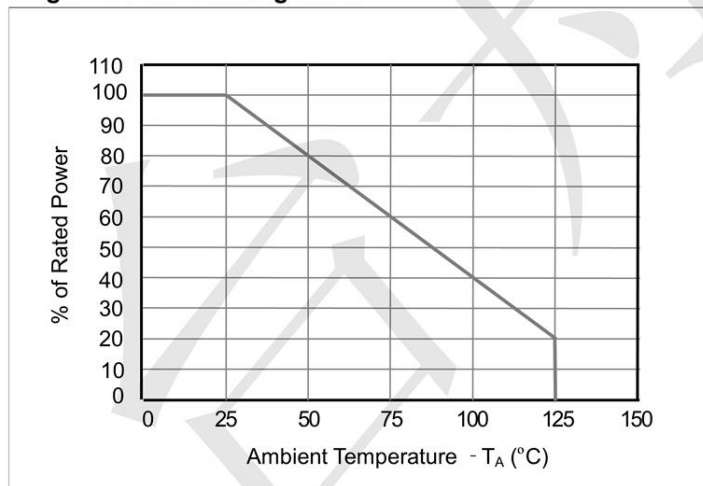
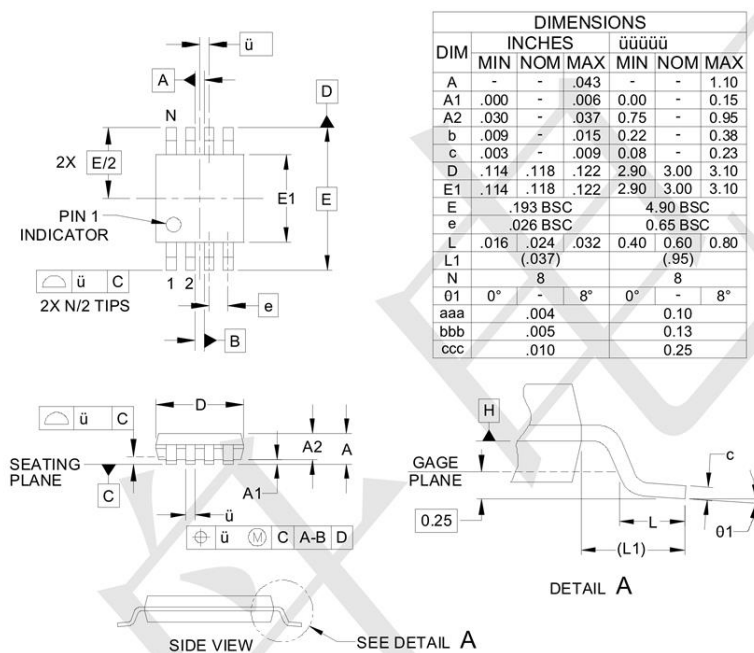


Fig3. Power Derating Curve



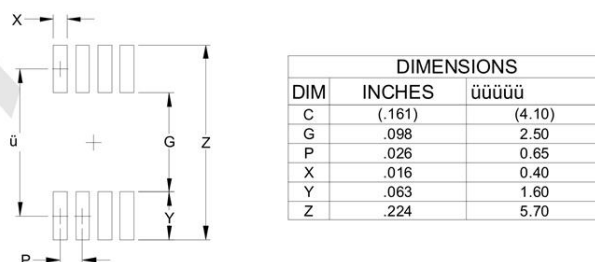
Outline Drawing - MSOP-8



NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. DATUMS **-A-** AND **-B-** TO BE DETERMINED AT DATUM PLANE **ü**
3. DIMENSIONS "E1" AND "D" DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
4. REFERENCE JEDEC STD MO-187, VARIATION AA.

Land Pattern - MSOP-8



NOTES:

1. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.