TECH PUBLIC
台舟电子

TPE05F5C6
5-Line TVS Array

www.sot23.com.tw

Features

- Working voltage: 5V
- Low clamping voltage
- Protects five I/O lines
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±15kV
    - Contact discharge: ±8kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

Mechanical Characteristics

- Package: SOT-363 (2.0X2.1X0.35mm)
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020

RoHS

Applications

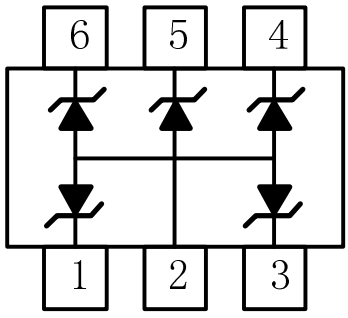
- Portable Instrumentation
- Microprocessor Based Equipmenmt
- Cell Phone Handsets and Accessories
- Personal Digital Assistants (PDAs) and Pagers

Ordering Information

Part Number	Qty per Reel	Reel Size
TPE05F5C6	3000	7″

TECHPUBLIC

Dimensions and Pin Configuration



Pin Configuration

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	60	W
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±15 ±8	kV
Operating Temperature Range	T_J	−55 to +125	°C
Storage Temperature Range	Tstg	−55 to +150	°C

Electrical Characteristics (T_A=25°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
Reverse Leakage Current	I_R			0.1	uA	V_{RWM} = 5V
Forward Voltage	V_F		0.85	1.2	V	I_F = 15mA
Clamping Voltage	V_C			10	V	I_{PP} = 10A (8 x 20μs pulse)
Clamping Voltage	V_C			13	V	I_{PP} =4.5A(8x20us pulse)
Junction Capacitance	C_J		15	25	pF	VR = 0V, f = 1MHz

Note 1: I/O pins are Pin 1, 3, 4, 5 and 6

PROTECTION PRODUCTS
Typical charateristics

Fig1. 8/20μs Pulse Waveform

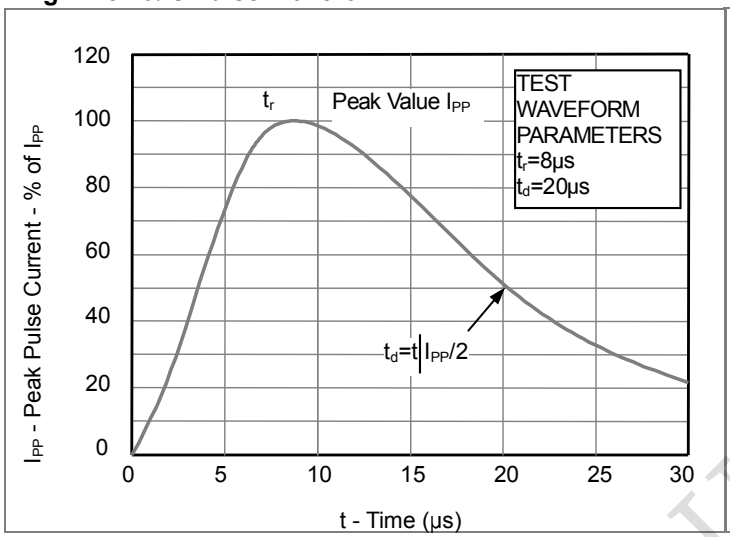


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

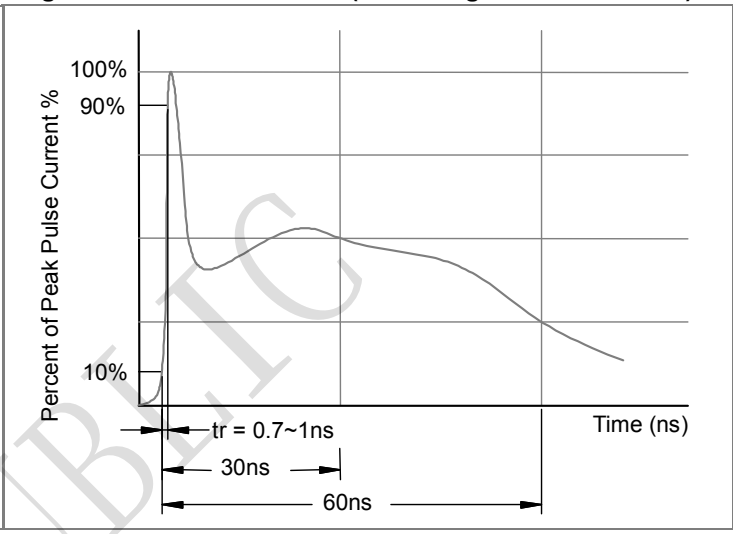
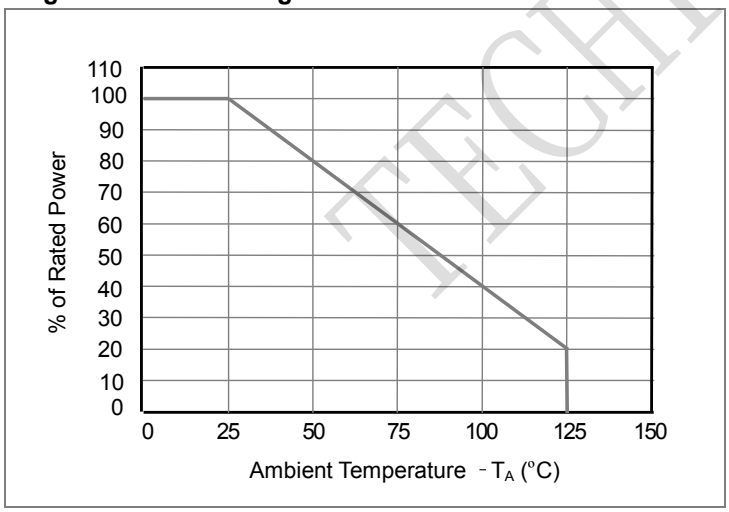
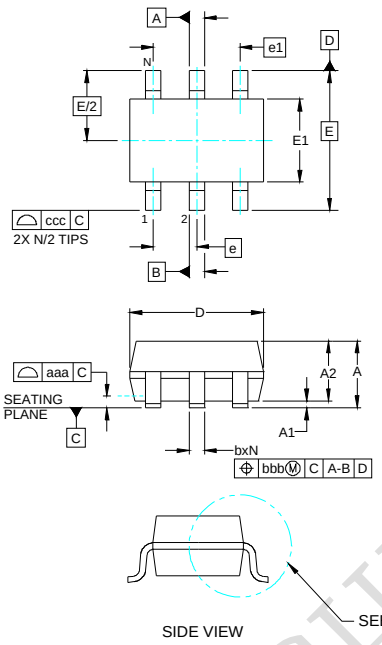


Fig3. Power Derating Curve

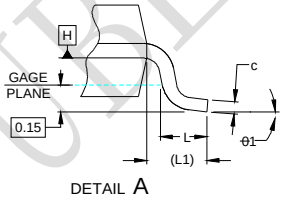


TECHPUBLIC

Outline Drawing - SOT-363(2.0X2.1)

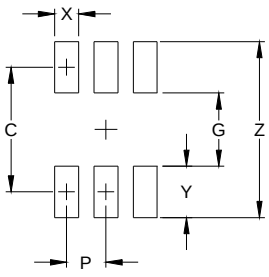


DIMENSIONS						
DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	-	-	.043	-	-	1.10
A1	.000	-	.004	0.00	-	0.10
A2	.028	.035	.039	0.70	0.90	1.00
b	.006	-	.012	0.15	-	0.30
c	.003	-	.009	0.08	-	0.22
D	.071	.079	.087	1.80	2.00	2.20
E1	.045	.049	.053	1.15	1.25	1.35
E	.083 BSC			2.10 BSC		
e	.026 BSC			0.65 BSC		
e1	.051			1.30 BSC		
L	.010	.014	.018	0.26	0.36	0.46
L1	(.017)			(0.42)		
N	6			6		
θ1	0°	-	8°	0°	-	8°
aaa	.004			0.10		
bbb	.004			0.10		
ccc	.012			0.30		



DETAIL A

Land Pattern - SOT-363



DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.073)	(1.85)
G	.039	1.00
P	.026	0.65
X	.016	0.40
Y	.033	0.85
Z	.106	2.70

TECHPUBLIC