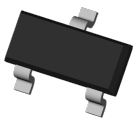
FEATURES

- 300 Watts Peak Pulse Power (t_p = 8/20 μs)
- Transient Protection for Data & Power Lines to IEC 61000-4-2 (ESD) ±15kV (Air), ±8kV (Contact)
- Dual Common Anode TVS
- Protects One Bidirectional Line or Two Unidirectional Lines
- Low Clamping Voltage



SOT-23

ORDERING INFORMATION

Device	Package
SM05SF	SOT-23

APPLICATIONS

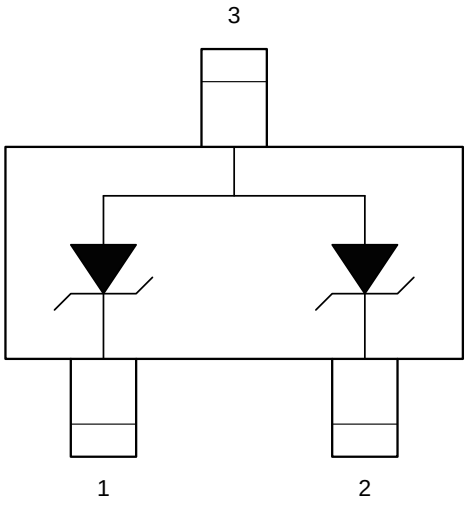
- Industrial Equipment
- Portable Electronics
- Point-of-Sales Terminals
- Set-Top Box
- Motor Controls
- Security and Alarm Systems

DESCRIPTION

The SM05 of transient voltage suppressors (TVS) is designed to protect components which are connected to data and transmission lines from voltage surges caused by electrostatic discharge (ESD), electrical fast transients (EFT), and lightning.

TVS diodes are characterized by their high surge capability, low operating and clamping voltages, and fast response time. This makes them ideal for used as board level protection of sensitive semiconductor components. The dual-junction common-anode design allows the user to protect one bidirectional data line of two unidirectional lines.

PIN CONFIGURATION AND BLOCK DIAGRAM



ORDERING INFORMATION

Package	Order No.	Description	Supplied As	Status
SOT23	SM05SF	Dual TVS Diode Array	Tape & Reel	Active

ABSOLUTE MAXIMUM RATINGS (Note 1)

CHARACTERISTIC	SYMBOL	VAULUE	UNIT
Peak Pulse Power (t_p = 8/20 μs)	P_{PK}	300	W
ESD Immunity Voltage	V_{ESD}	8 (Contact), 15 (Air)	kV
Max Junction Temperature	T_J	125	°C
Storage Temperature	T_{STG}	−55 to +150	°C

Note1. Stresses beyond those listed under *Absolute Maximum Ratings* may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated under *Recommended Operating Conditions* is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

Limits are for T_A = 25°C unless otherwise noted.

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Stand-Off Voltage	V_{RWM}		-	-	5.0	V
Breakdown Voltage	V_{BR}	I_R = 1mA	6.0	6.8	-	V
Reverse Leakage Current	I_R	V_R =5 V	-	-	5.0	μA
Junction Capacitance	C_j	f = 1 MHz, V_R = 0 V	-	-	350	pF
Clamping Voltage	V_C	I_R = 5.0 A, t_p = 8/20 μs	-	-	9.8	V
		I_R = 24.0 A, t_p = 8/20 μs	-	-	14.5	V
Peak Pulse Current	I_{PP}	t_p = 8/20 μs	-	-	17	A

TYPICAL OPERATING CHARACTERISTICS

T.B.D.

REVISION NOTICE

The description in this datasheet is subject to change without any notice to describe its electrical characteristics properly.