GENERAL SEMICONDUCTOR®

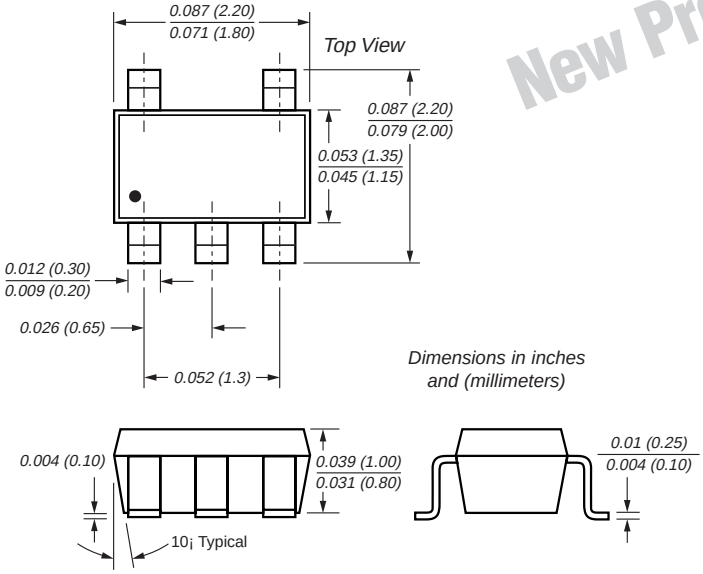
GMF05

TVS Diode Array

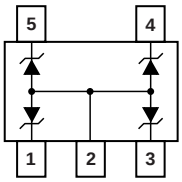
For ESD & Latch-Up Protection

New Product

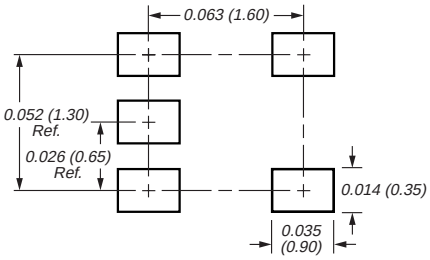
SOT-353



Pin Configuration (Top View)



Mounting Pad Layout



Mechanical Data

Case: SOT-353 package

Molding Compound Flammability Rating: UL 94V-0

Terminals: High temperature soldering guaranteed: 250°C/10 sec. at terminals

Marking Code: GF5

Packaging Codes - Options:
G1 - 10K per 13" reel, 30K/box
G2 - 3K per 7" reel, 30K/box

Features

- Transient protection for data lines as per
  IEC 1000-4-2 (ESD) 15kV (air), 8kV (contact)
  IEC 1000-4-4 (EFT) 40A (tp = 5/50ns)
  IEC 1000-4-5 (Lightning) 12A (tp = 8/20μs)
- Small package for use in portable electronics
- Unidirectional protection of 4 I/O lines
- Low leakage current
- Low operating and clamping voltages
- Ideal for cellular handsets, cordless phones, notebooks and handhelds, and digital cameras

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power 8/20μs waveform	P_{ppm}	200	W
Peak Pulse Current 8/20μs waveform	I_{PP}	12	A
Operating Temperature	T_J	–55 to +125	°C
Storage Temperature	T_{STG}	–55 to +150	°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Reverse Stand-Off Voltage	V_{RWM}	–	–	5	V
Reverse Breakdown Voltage at I_t = 1mA	V_{BR}	6	–	–	V
Reverse Leakage Current at V_{RWM} = 5V	I_R	–	–	10	μA
Clamping Voltage at I_{PP} = 1A, 8/20μs waveform at I_{PP} = 12A, 8/20μs waveform	V_C	–	–	9.5 12.5	V
Peak Forward Voltage at I_F = 1A, 8/20μs waveform	V_F	–	1.5	–	V
Junction Capacitance between I/O pins and Gnd V_R = 0V, f = 1MHz	C_j	–	–	150	pF

Ratings and Characteristic Curves (TA=25°C unless otherwise noted.)

Fig. 1 – Non-Repetitive Peak Pulse Power vs. Pulse Time

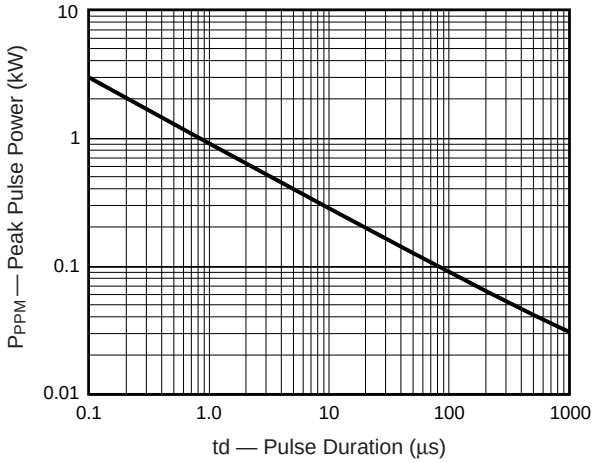


Fig. 2 – Pulse Derating Curve

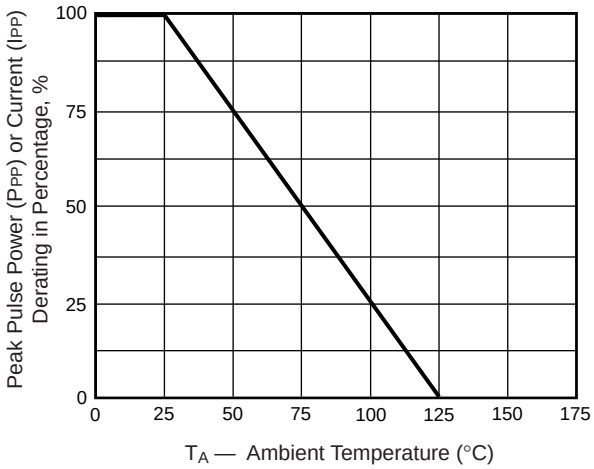


Fig. 3 – Pulse Waveform

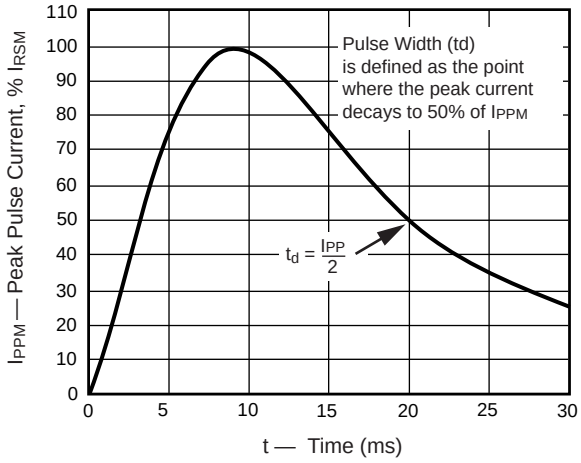


Fig. 4 – Clamping Voltage vs. Peak Pulse Current

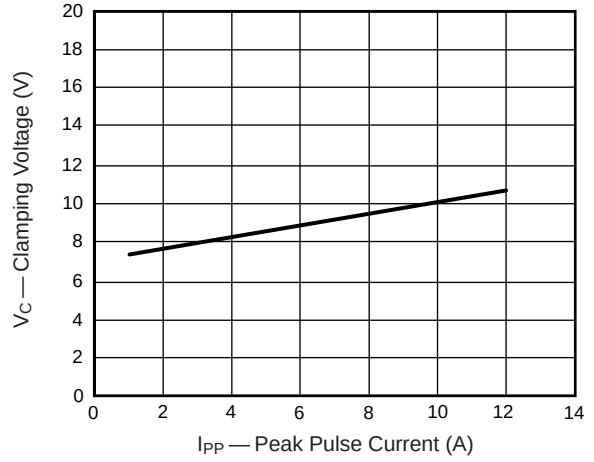


Fig. 5 – Typical Junction Capacitance