SMF05CT1G-L

ESD Protection Diode Array

Features

80Watts peak pulse power (tp = 8/20μs)

Tiny SOT363 package

Solid-state silicon-avalanche technology

Low clamping voltage

Low leakage current

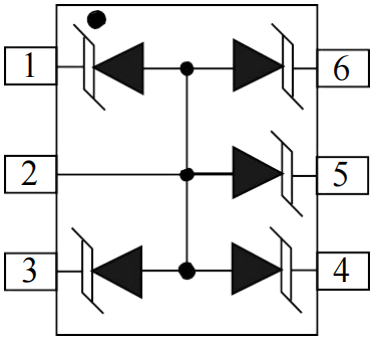
Protection five data/power line

IEC 61000-4-2 ±30kV contact ±30kV air

IEC 61000-4-4 (EFT) 40A (5/50ns)

IEC 61000-4-5 (Lightning) 8A (8/20μs)

Schematic & PIN Configuration



SOT-363 (Top View)

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

Rating	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	80	Watts
Peak Pulse Current (t_p =8/20μs) (note1)	I_{pp}	8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	℃
Junction Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{stg}	-55 to + 125	℃

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6.0			V
Reverse Leakage Current	I_R	V_{RWM}=5V,T=25℃		50	500	nA
Clamping Voltage	V_C	I_{PP}=7A,t_p=8/20μs		12		V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz IO to IO		30		pF
		V_R = 0V, f = 1MHz IO to GND		70		

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

Figure 1: Peak Pulse Power vs. Pulse Time

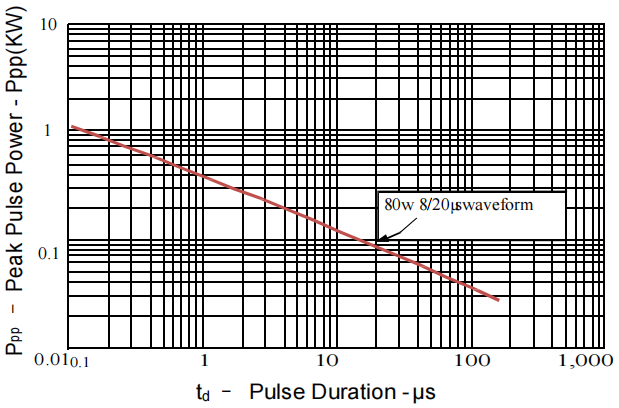


Figure 2: Power Derating Curve

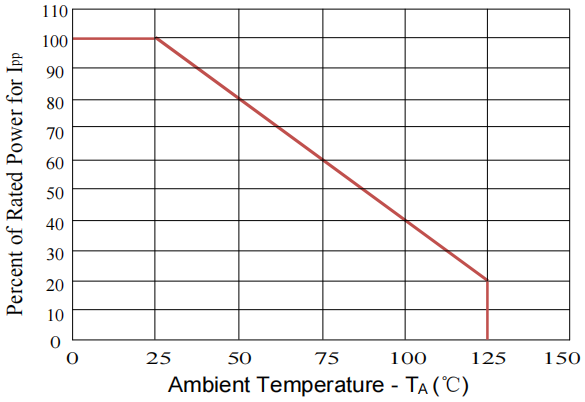


Figure3: Pulse Waveform

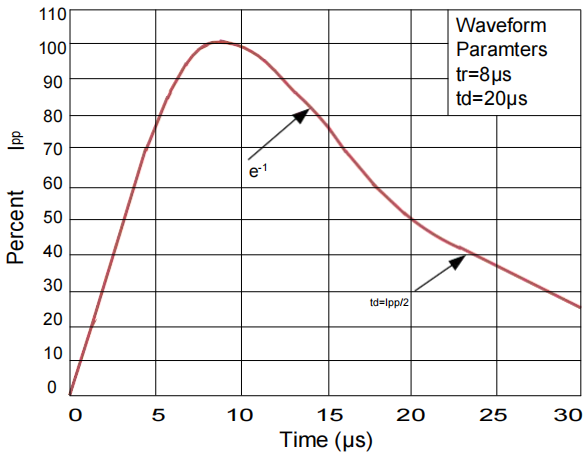
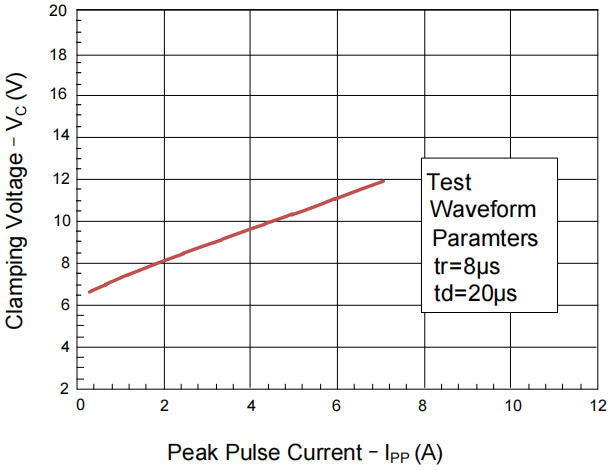


Figure 4: Clamping Voltage vs.Ipp



Outline Drawing – SOT363