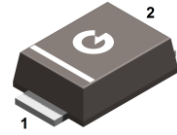


Features

- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): ± 25 kV (air), ± 25 kV (contact)
- Excellent clamping capability
- HBM: ± 8 kV; CDM: ± 2 kV
- RoHS compliant with Halogen-free

HF



SMAFL

Mechanical Data

- Case: SMAFL
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
P4SAL16A	SMAFL	10000 pcs / Tape & Reel	L16A

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

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	$V_{\text{ESD-A}}$	± 25	kV
IEC 61000-4-2; ESD (Contact)	$V_{\text{ESD-C}}$	± 25	kV
Peak Pulse Power ($t_p = 10/1000\mu\text{s}$)	P_{PP}	400	W
Peak Pulse Current ($t_p = 10/1000\mu\text{s}$)	I_{PP}	19	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta\text{JA}}$	64	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta\text{JC}}$	27	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta\text{JL}}$	21	$^\circ\text{C/W}$
Junction Temperature Range	T_J	$-55 \sim +150$	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	$-55 \sim +150$	$^\circ\text{C}$

Note 1: The data tested by surface mounted on PCB with 10 mm x 20 mm x 0.1mm copper pad areas

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	V_{RWM}		-	-	13.6	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_T = 1\text{mA}$	15.2	-	16.8	V
Reverse Leakage Current	I_R	$V_{RWM} = 13.6\text{V}$	-	-	5	μA
Clamping Voltage	V_C	$I_{PP} = 19\text{A}$, $t_p = 10/1000\mu\text{s}$	-	-	22.5	V
Junction Capacitance	C_J	$V_R = 4\text{V}$, $f = 1\text{MHz}$	-	471	-	pF

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

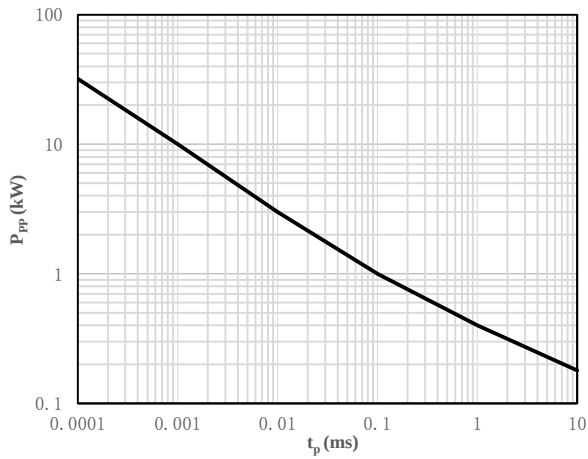


Fig 1 Peak Pulse Power Rating

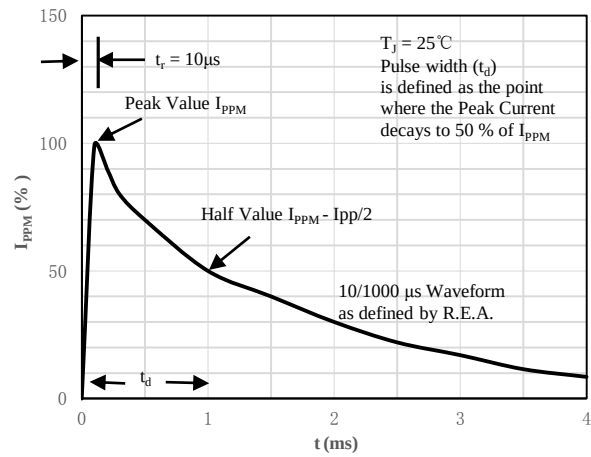


Fig 2 Pulse Waveform

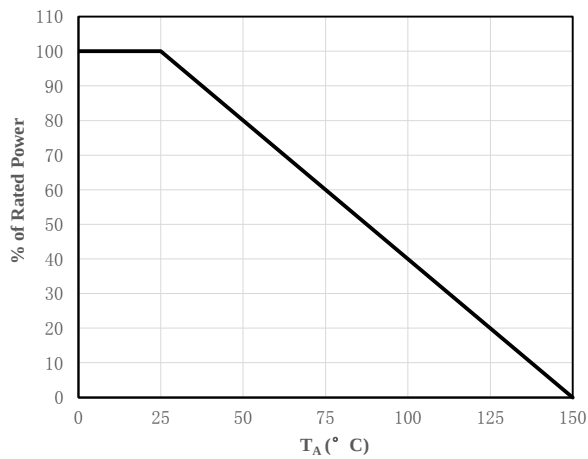


Fig 3 Power Derating Curve

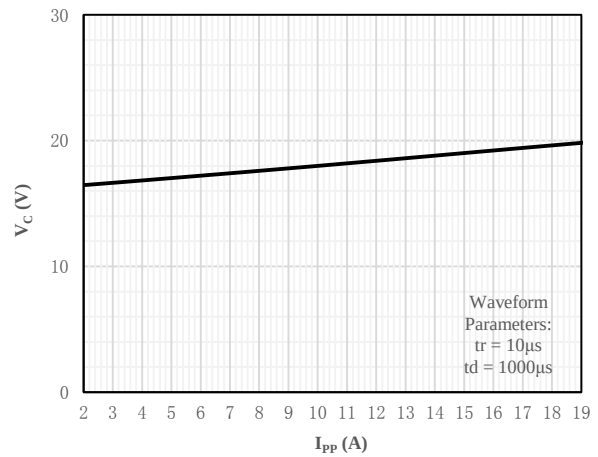


Fig 4 Clamping Voltage vs. Peak Pulse Current

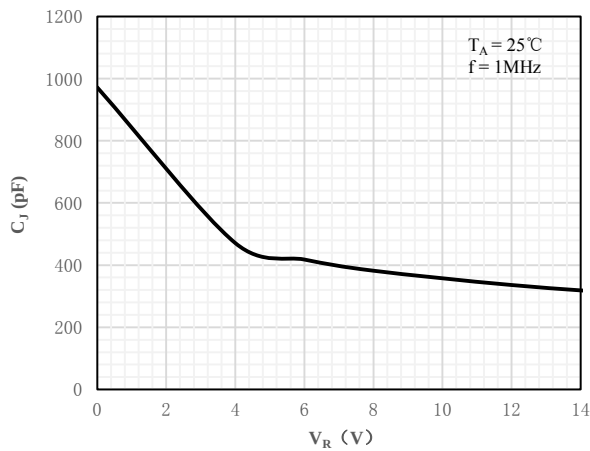
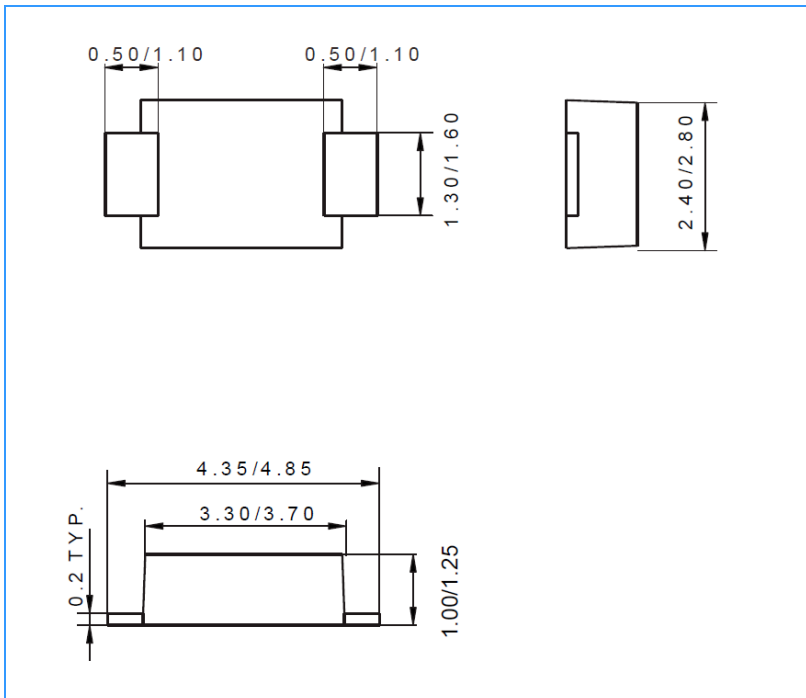


Fig 5 Junction Capacitance vs. Reverse Voltage

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)

