

Features

- 600 watts peak pulse power ($t_p = 8/20\mu s$)
- Protects two line pairs (Four Lines)
- Ultra low leakage: nA level
- Low operating voltage: 2.8V
- Very low capacitance: 1pF
- Ultra low clamping voltage
- RoHS compliant



SOP-8

IEC Compatibility (EN61000-4)

- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 25A (8/20 μs)

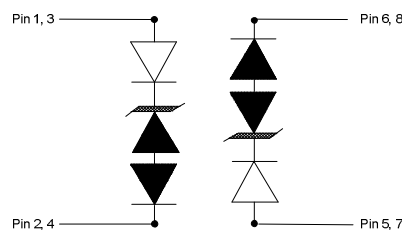
Applications

- Base Station
- Analog Inputs
- Switch Systems
- 10/100/1000 Ethernet
- WAN/LAN Equipment
- Desktops, Servers, and Notebooks
- Low Voltage Interfaces

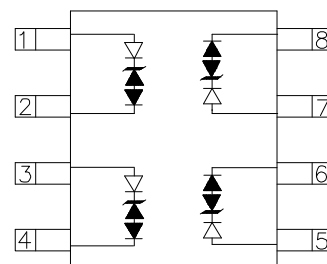
Mechanical Characteristics

- Lead Finish: NiPdAu
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

Schematic & PIN Configuration



Circuit and Pin Schematic



SOP-8 Outline

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu s$ waveform)	P_{PP}	600	W
Peak Pulse Current (8/20 μs)	I_{PP}	30	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T_J	-55 to +125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}C$

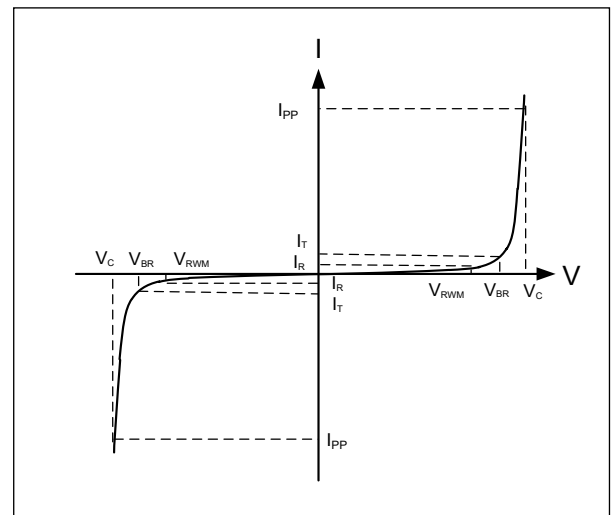
Electrical Characteristics

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				2.8	V
Breakdown Voltage	V_{BR}	$I_T = 2\mu A$	3			V
Reverse Leakage Current	I_R	$V_{RWM} = 2.8V$		0.1	1	μA
Clamping Voltage	V_C	$I_{PP} = 1A$ (8 x 20 μs pulse)			6	V
Clamping Voltage	V_C	$I_{PP} = 5A$ (8 x 20 μs pulse)			8	V
Clamping Voltage	V_C	$I_{PP} = 10A$ (8 x 20 μs pulse)			10	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		2		pF

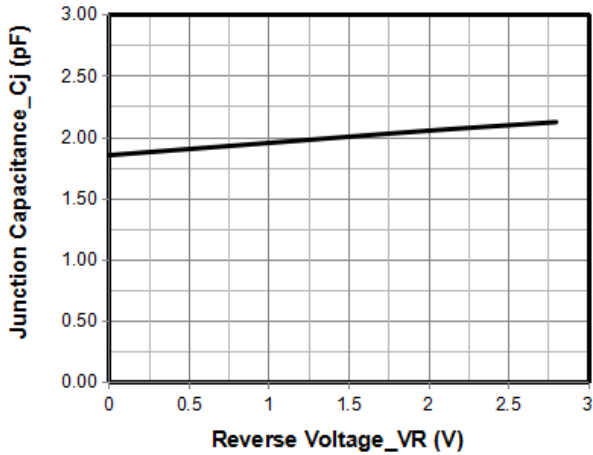
Electrical Parameters (TA = 25 $^{\circ}C$ unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

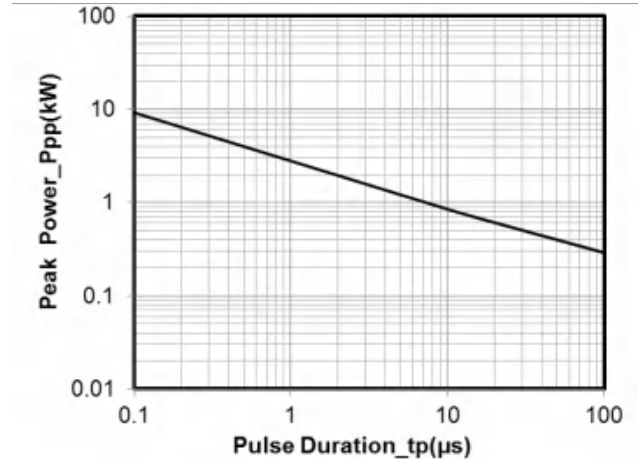
Note: 8/20 μs pulse waveform.



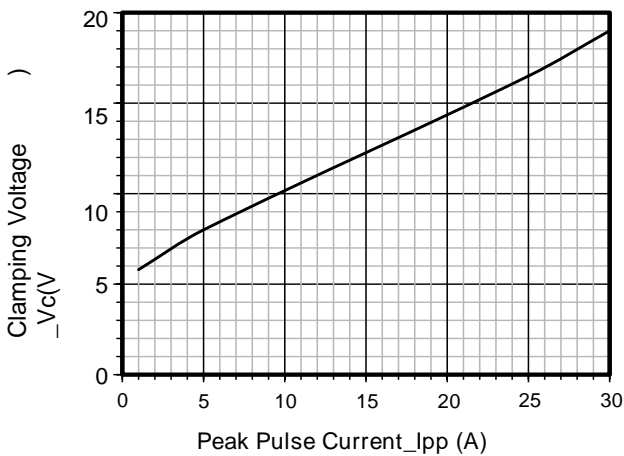
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



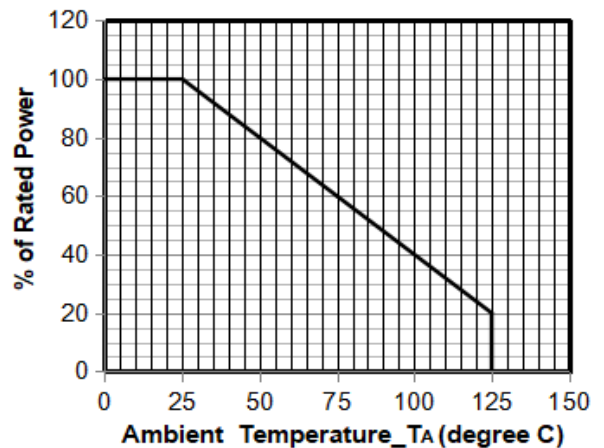
Junction Capacitance vs. Reverse Voltage



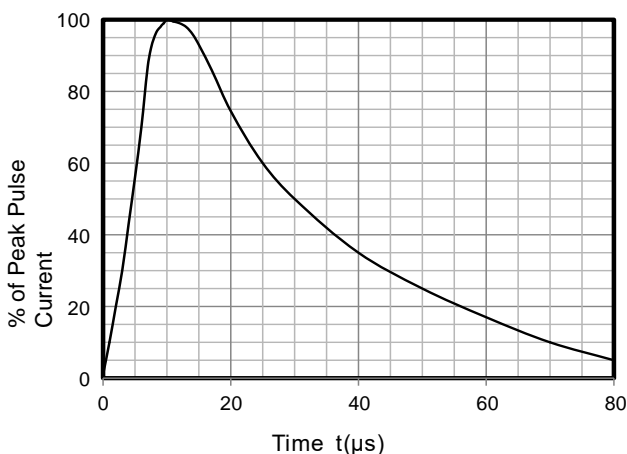
Peak Pulse Power vs. Pulse Time



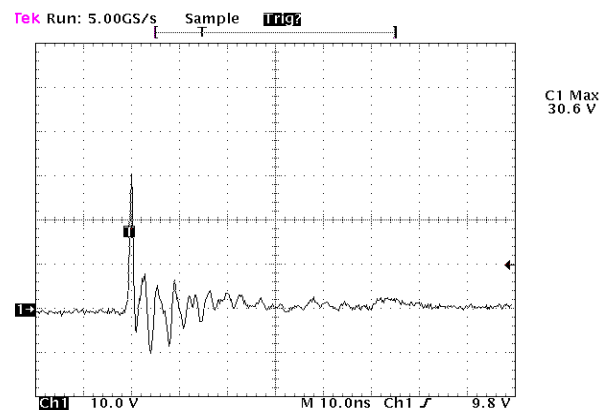
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



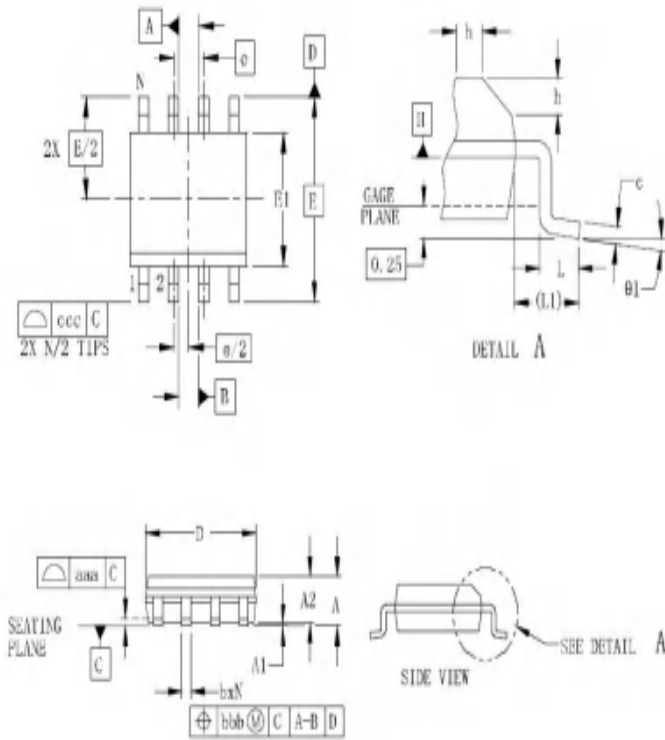
8 X 20μs Pulse Waveform



Note: Data is taken with a 10x attenuator

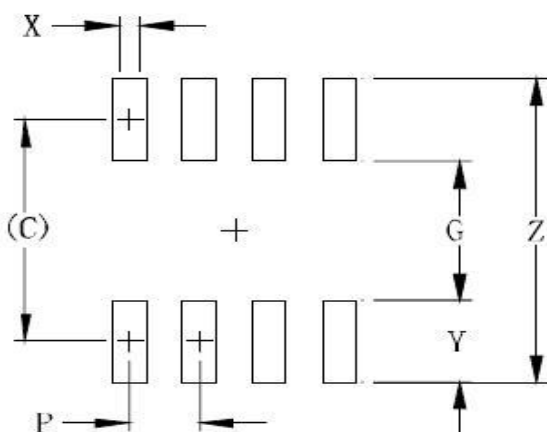
**ESD Clamping Voltage
8 kV Contact per IEC61000-4-2**

Package Mechanical Data



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.35€	-	1.75€	0.053	-	0.069
A1	0.10€	-	0.25€	0.004	-	0.010
A2	1.25€	-	1.65€	0.049	-	0.065
b	0.31€	-	0.51€	0.012	-	0.020
c	0.17€	-	0.25€	0.007	-	0.010
D	4.80€	4.90€	5.00€	0.189	0.193	0.197
E1	3.80€	3.90€	4.00€	0.150	0.154	0.157
E	6.00€ ^{BSC}			0.236 ^{BSC}		
e	1.27€ ^{BSC}			0.050 ^{BSC}		
h	0.25€	-	0.50€	0.010	-	0.020
L	0.40€	0.72€	1.04€	0.016	0.028	0.041
L1	(1.04€)			(0.041)		
N	8.000			8.000		
Ø1	0°	-	8°	0°	-	8°
	0.10€			0.004		
	0.25€			0.010		
HE	0.20€			0.008		

Suggested Land Pattern



SYM	DIMENSIONS	
	TSSQOVÜÜ	QOPÜ
Ö	QED	ED
Ö	HEO	EF
Ü	FO	€
Y	EO	EG
Y	GO	EI
Z	IEO	EGF

Ordering Information

Order code	Package	Base qty	Delivery mode
PTP88L2M2BA60	SOP-8	2.5K	Tape and reel

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