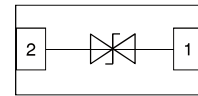
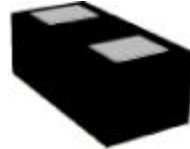




CESD0402NC5VB

Features

- 60Watts peak pulse power ($t_p = 8/20\mu s$)
- 0402 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Medium capacitance ($C_J = 15pF$ typ.)
- Protection one data/power line to:
 - IEC 61000-4-2 $\pm 25kV$ contact $\pm 20kV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 5A (8/20 μs)



Mechanical Data

- **Case:** 0402 (plastic package).
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Applications

- Audio Line, Speaker, Headset,
Microphone Protection
- Human Interface Devices
(Keyboard, Touchpad, Buttons)

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu S$)	P_{PP}	60	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	25/20	kV
Peak Pulse Current ($t_P = 8/20\mu S$)	I_{PP}	5.0	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

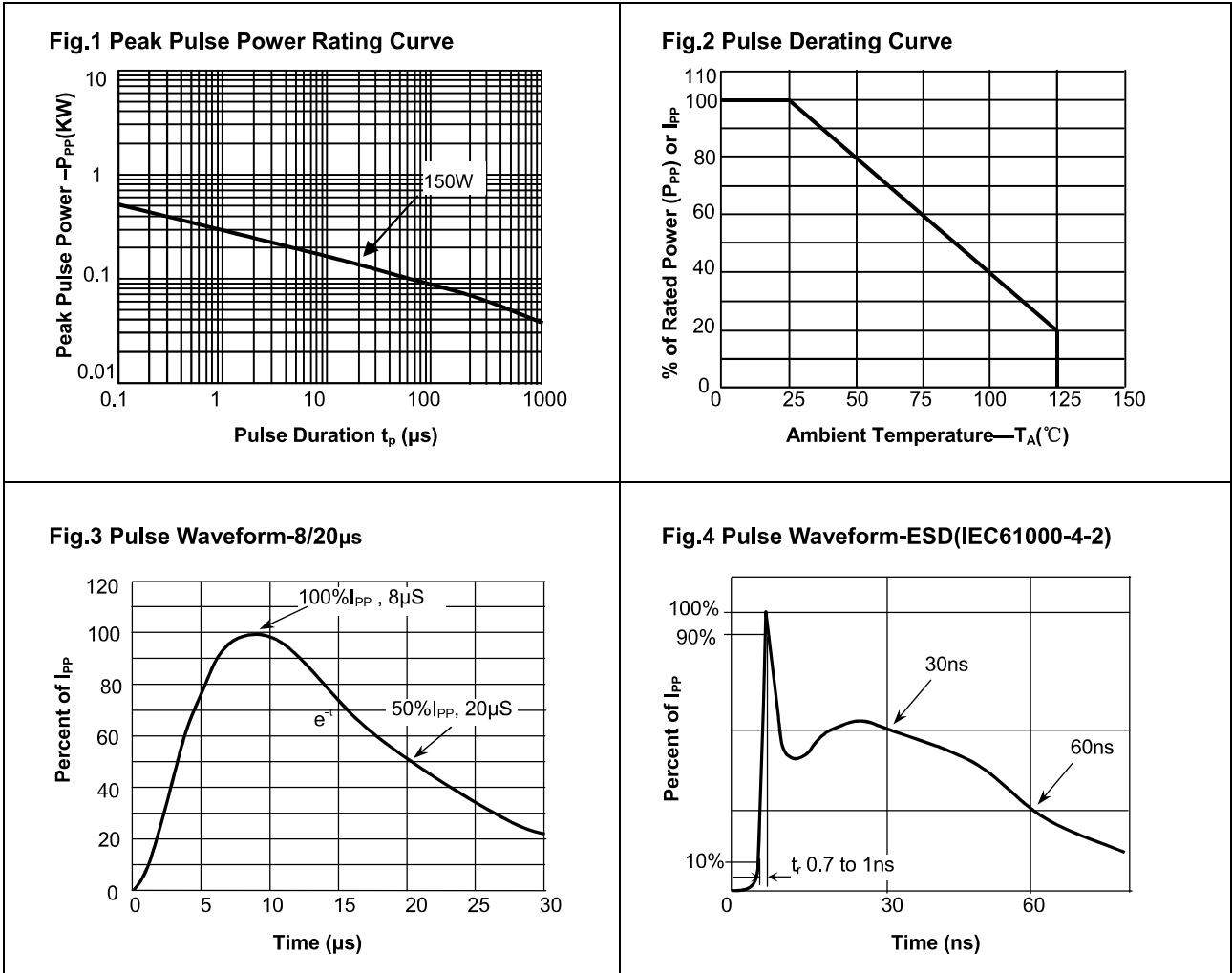
Electrical Characteristics

($T_A = 25$ °C unless otherwise specified)

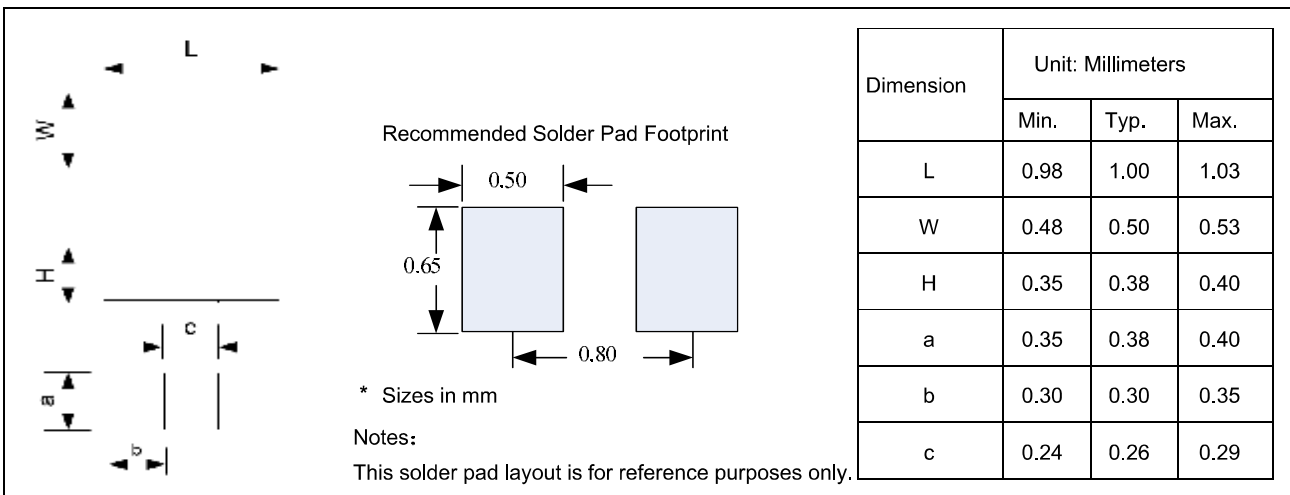
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	5.6	6.5	8.4	V
Reverse Leakage Current	I_R	$V_R=5V$			100	nA
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP}=1A$			10	V
		$I_{PP}=5A$			12	V
Clamping Voltage (IEC 61000-4-2)	V_C	$V_{ESD}=8kV$		15		V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		15		pF

CESD0402NC5VB

Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

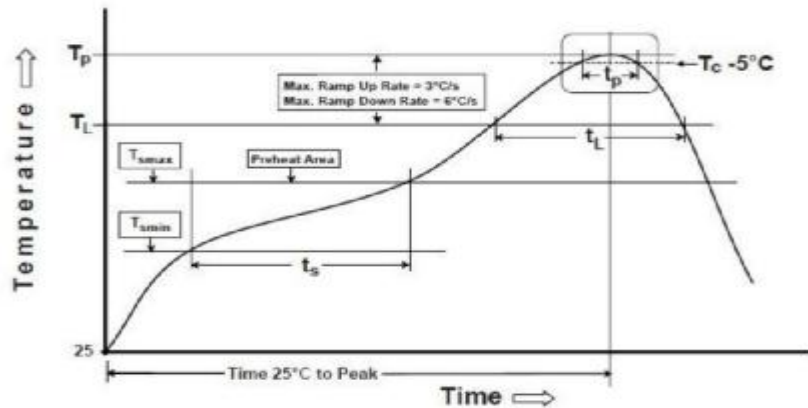


Package Dimensions



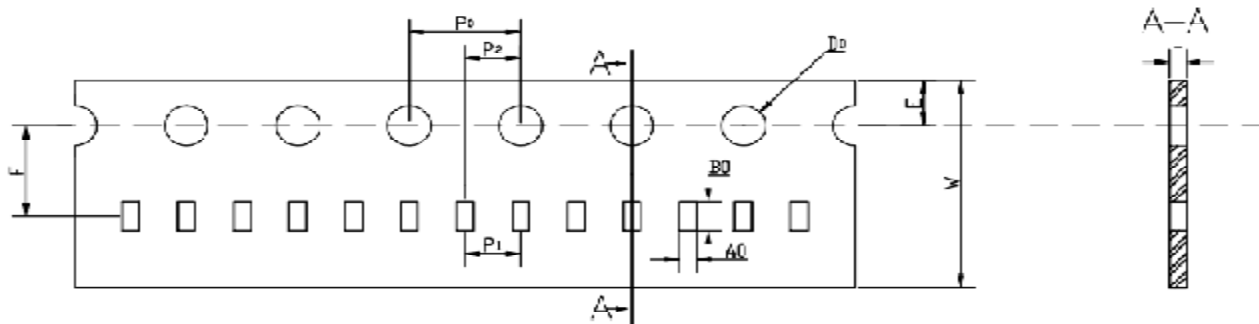
CESD0402NC5VB

Soldering Parameters



Profile Feature	Pb-Free Assembly
Pre Heat Temperature Min (T_{smin}) Temperature Max (T_{smax}) Time (t_s) from (T_{smin} to T_{smax})	150 °C 200 °C 60-120 seconds
Ramp-up Rate (T_L to T_p)	3 °C/second max.
Liquidus temperature (T_L) Time (t_l) maintained above T_L	217 °C 60-150 seconds
Peak package body temperature (T_p)	260 ^{+0/-5} °C
Time(t_p)* within 5°C of the specified classification temperature (T_c)	30* seconds
Ramp-down Rate (T_p to T_L)	6 °C/second max.
Time 25 °C to peak temperature	8 minutes max.
* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.	

Taping Specification



Tape Dimension	A ₀	B ₀	W	F	E	P ₁	P ₂	P ₀	D ₀	T
		0.68±0.03	1.17±0.03	8.00±0.10	3.50±0.05	1.75±0.10	2.00±0.05	2.00±0.05	4.00±0.10	1.55±0.05

Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
CESD0402NC5VB	0402	Tape and reel	10000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2016	1.0	Initial release