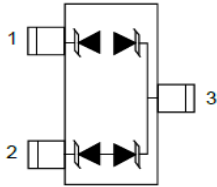


SOT-23

Features

40Watts peak pulse power($t_p=8/20\mu s$)
 Low clamping voltage
 Low leakage current
 Glass passivated junction
 IEC 61000-4-2 $\pm 10KV$ contact $\pm 15KV$ air
 Halogen free and RoHS compliant

Mechanical Data

CASE: SOT23 Molded Plastic
 Molding compound flammability rating: UL 94V-0
 Mounting Position:Any

Making Code & Ordering information

	Ordercode	Package	Base qty	Deliverymode
	PESD5V0U2BT-K	SOT-23	3000	Tape and reel

Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	40	Watts
Peak Pulse Current ($t_p=8/20\mu s$)(note1)	I_{PP}	3.0	A
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	V_{ESD}	15 10	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified).

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	5.5	6.5	8.5	V
Trigger Voltage	V_T		12		18	V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^\circ C$		0.1	0.5	μA
Clamping Voltage	V_C	$I_{PP}=3.0A, t_p=8/20\mu s$			13	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		2.7	3.5	pF

Ratings and Characteristic Curves

(Ratings at 25°C ambient temperature unless otherwise specified).

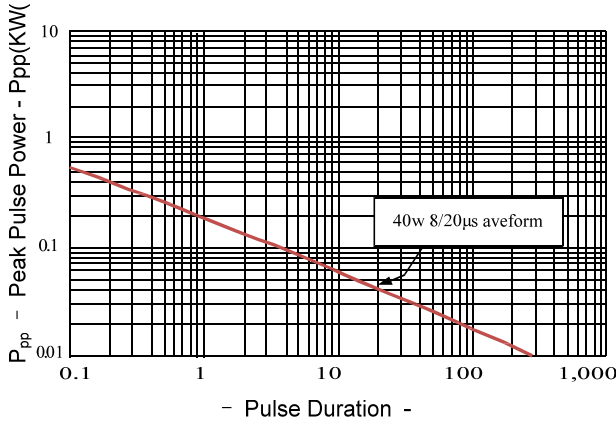


Figure 1: Peak Pulse Power vs. Pulse Time

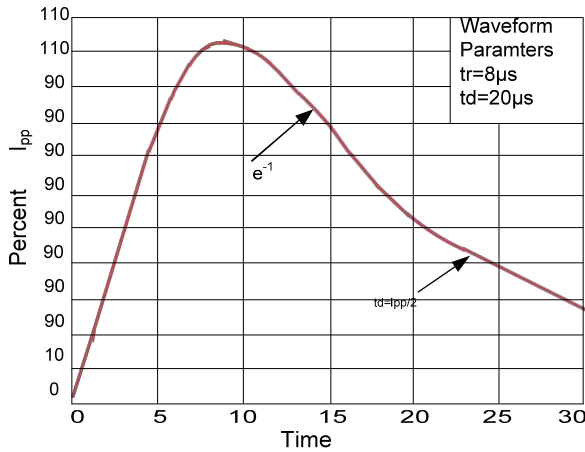


Figure3: Pulse Waveform

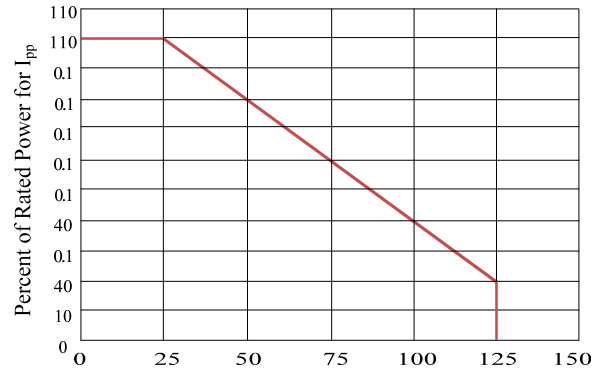


Figure 2: Power Derating Curve

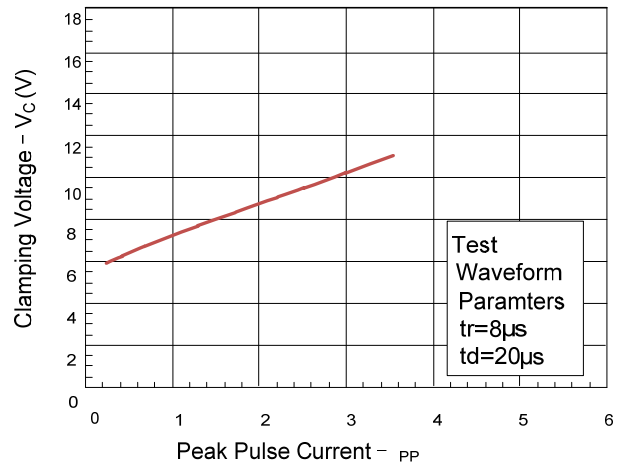
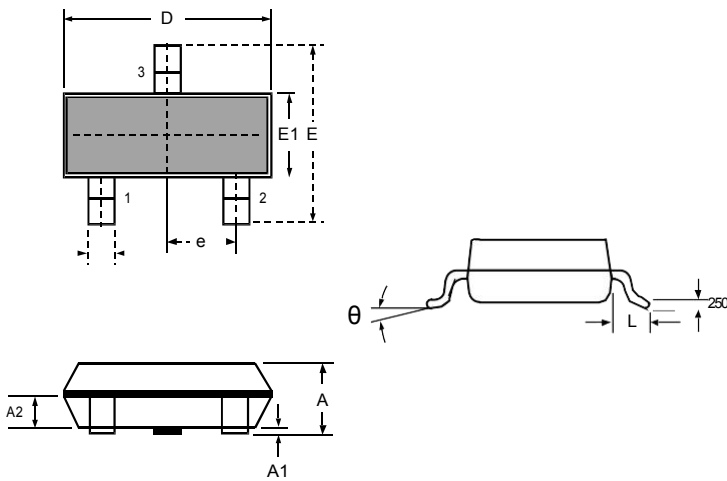


Figure 4: Clamping Voltage vs. Ipp

Package Outline Dimensions: SOT-23



DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
D	2.800	3.000	0.110	0.118
b	0.300	0.500	0.012	0.020
E	2.250	2.550	0.089	0.100
E1	1.200	1.400	0.047	0.055
e	0.950 BSC		0.037 BSC	
L	0.300	0.500	0.012	0.020
θ	0	8°	0	8°

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