

FEATURES:

- ✧ Planar technology.
- ✧ Halogen-free and ROHS compliant.
- ✧ Stand-off voltage 3.3V.
- ✧ 200W peak pulse power capability at 10×1000μs waveform.
- ✧ Excellent clamping capability.
- ✧ Fast response time.

ABSOLUTE MAXIMUM RATINGS (T_A=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage and operating junction temperature range	T _{STG} /T _J	-55 to +150	°C
Steady state power dissipation on infinite heat sink at T _L =75°C	P _{M(AV)}	2.8	W
Peak pulse power dissipation on 10/1000μs waveform	P _{PP}	200	W

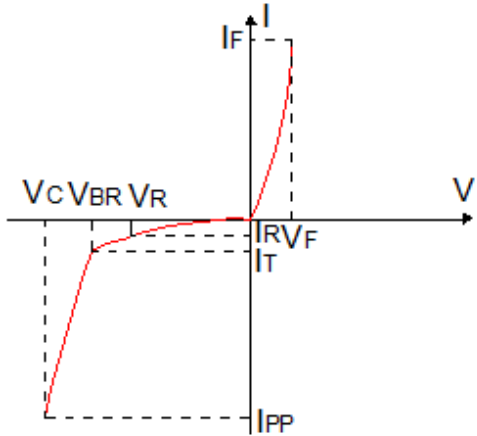
ELECTRICAL CHARACTERISTICS (T_A=25°C)

Part Number	V _R	I _{R@V_R}	V _{BR@I_T}	I _T	V _{C@I_{PP}}	I _{PP} ^①	C _O ^②	Marking
	V	μA	V (min)	mA	V (max)	A (max)	pF (typ.)	
SOD3V3A	3.3	50	4.1	1	7.3	27	1900	U03A

① Surge waveform: 10/1000μs

② C_O is measured at: V_{bias}=0V, V_{RMS}=0.1V, f=1MHz

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Symbol	Parameter	I-V curve
V _R	Stand-off voltage	
V _{BR}	Breakdown voltage	
V _C	Clamping voltage	
I _R	Off-state reverse leakage current	
I _T	A specified reverse current	
I _{PP}	A specified peak-pulse current	
V _F	Forward voltage drop	

Rating and characteristic curves

FIG.1 - PULSE DERATING CURVE

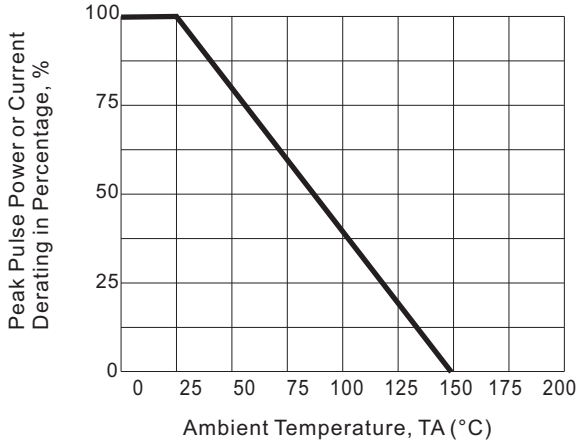


FIG.2 - 10X1000us PULSE WAVEFORM

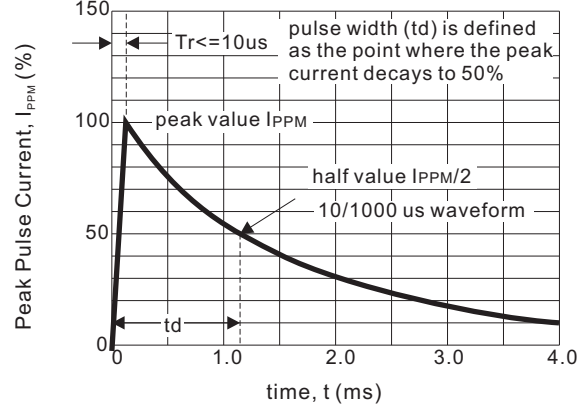


FIG.3 - 8X20us PULSE WAVEFORM

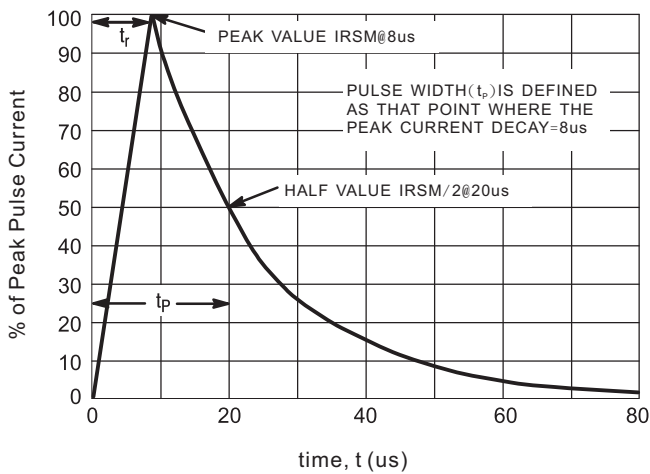


FIG.4 - PEAK PULSE POWER RATING CURVE

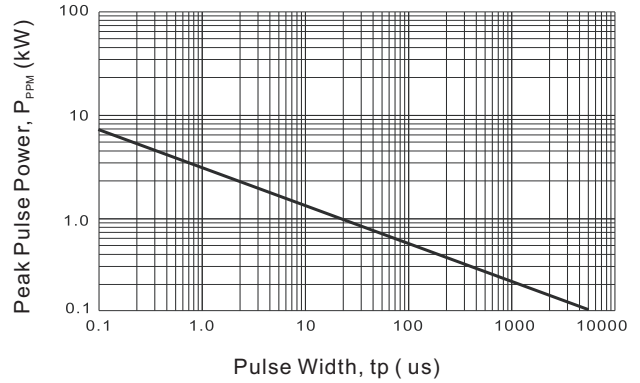
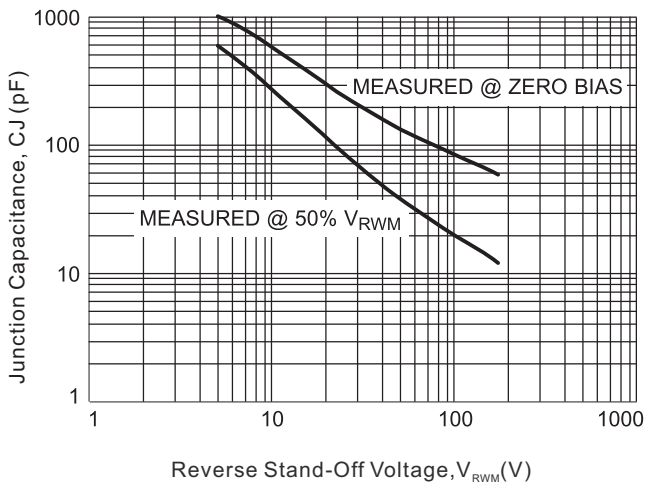


FIG.5 - TYPICAL JUNCTION CAPACITANCE



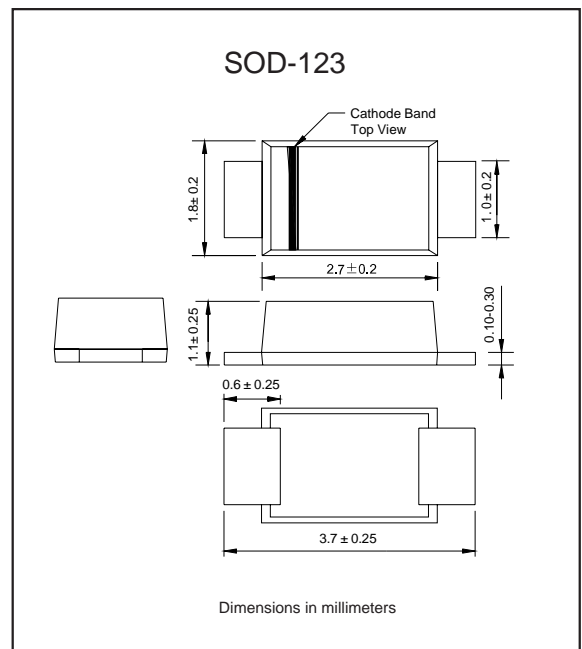
Pinning information

Pin	Simplified outline	Symbol
Uni-Directional Pin1 cathode Pin2 anode		

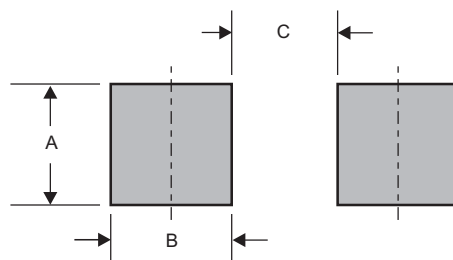
Marking

Type number	Marking code
SOD3V3A	

Package Mechanical data



Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.044 (1.10)	0.040 (1.00)	0.079 (2.00)

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(TL to TP)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(ts)	150°C 200°C 60~120sec
Tsmax to TL -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(TL) -Time(tL)	217°C 60~260sec
Peak Temperature(TP)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(tp)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes