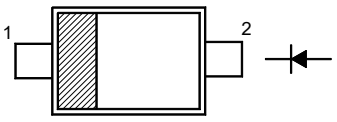
High Voltage Switching Diode

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-523 and symbol

Features

- AEC-Q101 Qualified
- Small surface mounting type
- High speed
- Suitable for high packing density
- High voltage capability
- Halogen and Antimony Free(HAF), RoHS compliant

Applications

- Ultra high speed switching

Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage		V_{RRM}	300	V
Reverse Voltage		V_R	300	V
Continuous Forward Current		I_F	225	mA
Repetitive Peak Forward Current		I_{FRM}	625	mA
Non-Repetitive Peak Forward Current	tp ≤1 ms tp ≤1 μs	I_{FSM}	1 4	A
Power Dissipation [1)]		P_D	250	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance Junction to Ambient [1)]	$R_{\theta JA}$	500	℃/W

[1)] Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at I_R = 100 μA	$V_{(BR)R}$	300	-	V
Forward Voltage at I_F = 100 mA	V_F	-	1.1	V
Reverse Current at V_R = 250 V	I_R	-	150	nA
Total Capacitance at V_R = 0 V, f = 1 MHz	C_T	-	5	pF
Reverse Recovery Time at I_F = I_R = 30 mA, R_L = 100 Ω, I_{RR} = 0.1 X I_R	t_{rr}	-	50	ns

Electrical Characteristic Curve

Fig. 1 Power Derating Curve

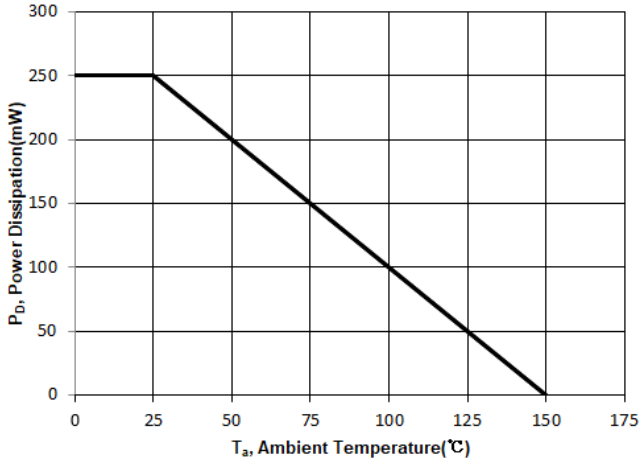


Fig. 2 Forward Characteristic Curve

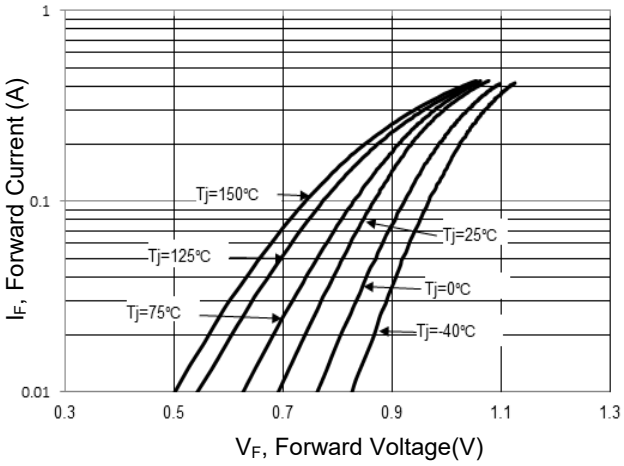


Fig. 3 Reverse Characteristic Curve

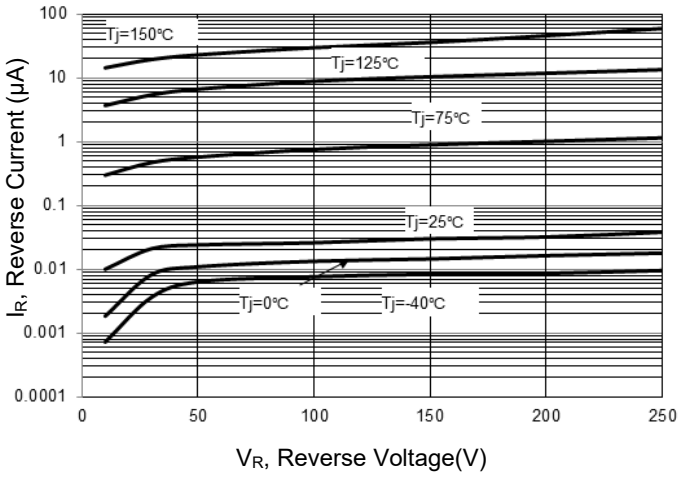
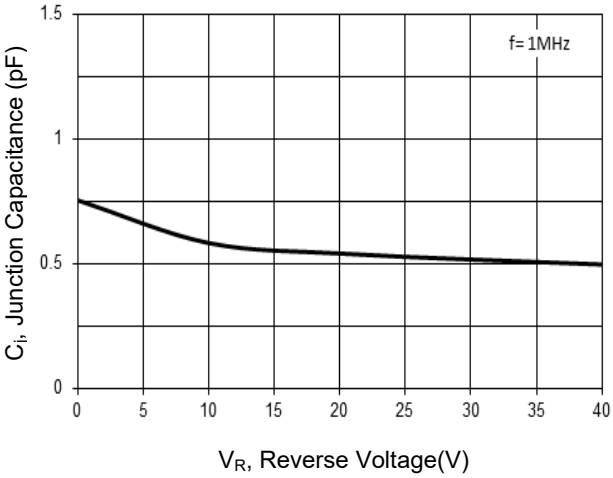
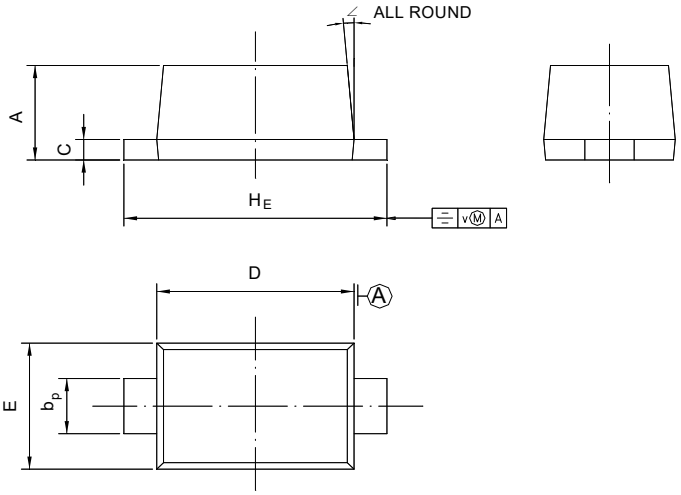


Fig. 4 Junction Capacitance



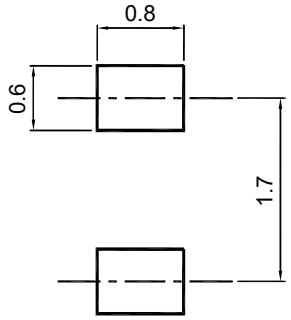
PACKAGE OUTLINE

Plastic surface mounted package **SOD-523**



UNIT	A	b_p	C	D	E	H_E	V	∠
mm	0.70 0.60	0.4 0.3	0.135 0.100	1.25 1.15	0.85 0.75	1.7 1.5	0.1	5°

Recommended Soldering Footprint

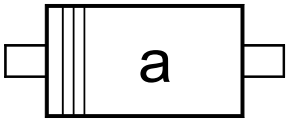


Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-523	8	4 ± 0.1	0.157 ± 0.004	178	7	4,000

Marking information

" a " = Part No.
" III " = Cathode line
Font type: Arial



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