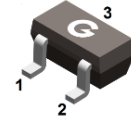
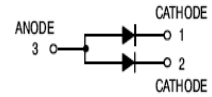


Features

- Fast switching speed
- High conductance
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF



SOT-523

Mechanical Data

- Case: SOT-523
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TDAP222	SOT-523	3000 pcs / Tape & Reel	P

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V _{RM}	80	V
DC Blocking Voltage	V _R	80	V
Forward Continuous Current	I _F	100	mA
Maximum Peak Forward Current	I _{FM}	300	mA
Non-repetitive Peak Forward Surge Current, 1μs	I _{FSM}	2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	150	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	165	°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	100	°C/W
Thermal Resistance Junction-to-Lead *1	R _{θJL}	90	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	80	-	-	V
Forward Voltage	V_F	$I_F = 100\text{mA}$	-	-	1.2	V
Maximum Peak Reverse Current	I_R	$V_R = 70\text{V}$	-	-	100	nA
Total Capacitance	C_J	$V_R = 6\text{V}$, $f = 1.0\text{MHz}$	-	-	3.5	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 5\text{mA}$ $I_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$	-	-	4	ns

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

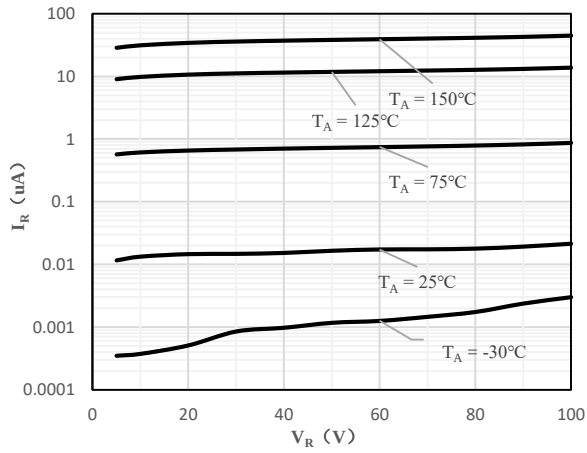


Fig 1 Typical Reverse Characteristic

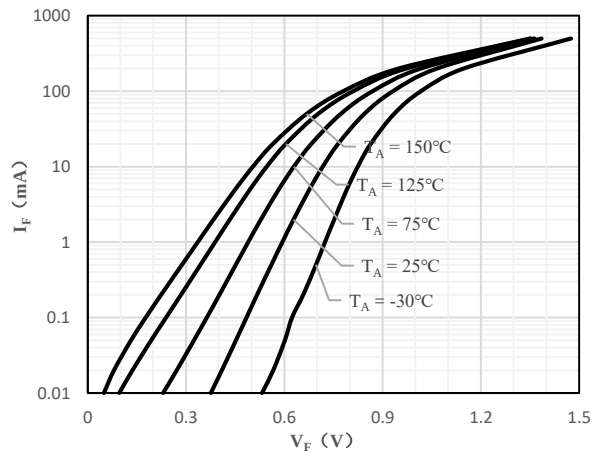


Fig 2 Typical Forward Characteristics

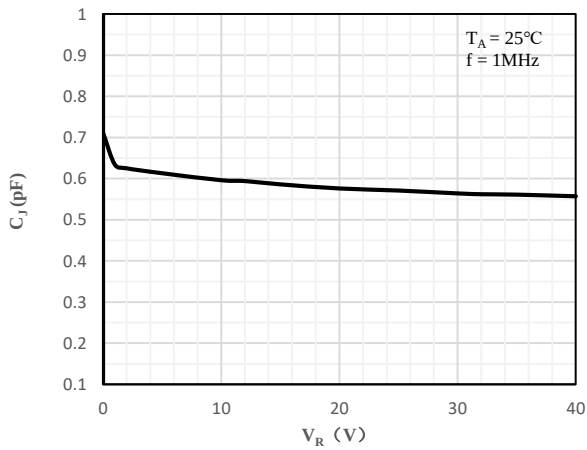


Fig 3 Capacitance vs. Reverse Voltage

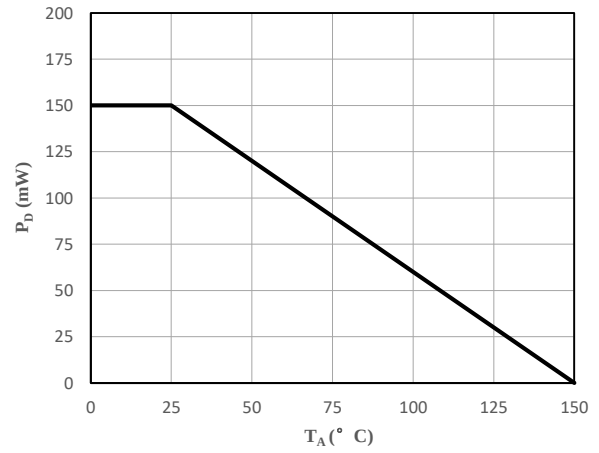
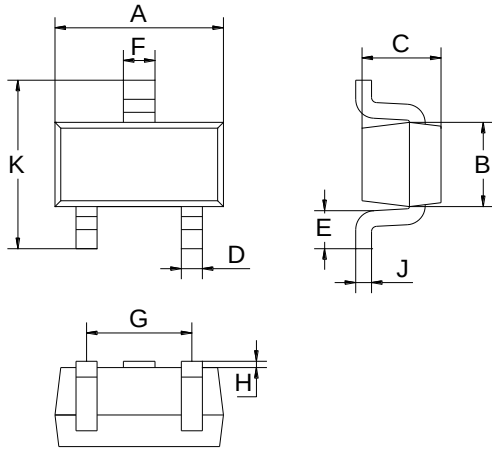


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOT-523		
Dimension	Min.	Max.
A	1.50	1.70
B	0.75	0.85
C	0.60	0.80
D	0.15	0.30
E	0.30	0.40
F	0.25	0.40
G	0.90	1.10
H	0.02	0.10
J	0.08	0.18
K	1.45	1.75

Mounting Pad Layout (Unit: mm)

SOT-523

