



Micro Commercial Components



Micro Commercial Components
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ESD12VK4

12 Volts
ESD Protection
Device

SOT23-6L

Features

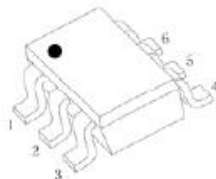
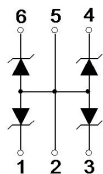
- Halogen free available upon request by adding suffix "-HF"
Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
Epoxy meets UL 94 V-0 flammability rating
Moisture Sensitivity Level 1
Uni-directional ESD protection of one line
Low reverse clamping voltage
Low leakage current
Fast response time

Maximum Ratings

- Operating Junction & Storage Temperature: -55°C to +150°C

Table with 4 columns: Parameter, Symbol, Limits, unit. Rows include IEC61000-4-2(ESD) Air Contact, Peak Pulse Power, and Peak Pulse Current.

Pin Configuration



Marking: 12VK4

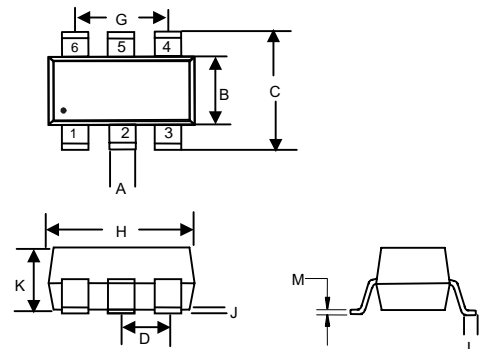
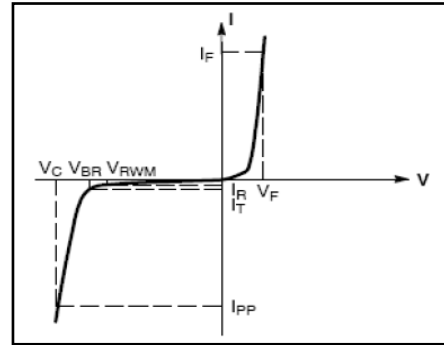


Table with 6 columns: DIM, INCHES (MIN, MAX), MM (MIN, MAX), NOTE. Lists dimensions A through M.

ESD12VK4

ELECTRICAL PARAMETER

| Symbol | Parameter |
|-----------|-------------------------------------|
| V_C | Clamping Voltage @ I_{PP} |
| I_{PP} | Peak Pulse Current |
| V_{BR} | Breakdown Voltage @ I_T |
| I_T | Test Current |
| I_R | Reverse Leakage Current @ V_{RWM} |
| V_{RWM} | Reverse Standoff Voltage |
| V_F | Forward Voltage @ I_F |
| I_F | Forward Current |



V-I characteristics for a uni-directional TVS

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

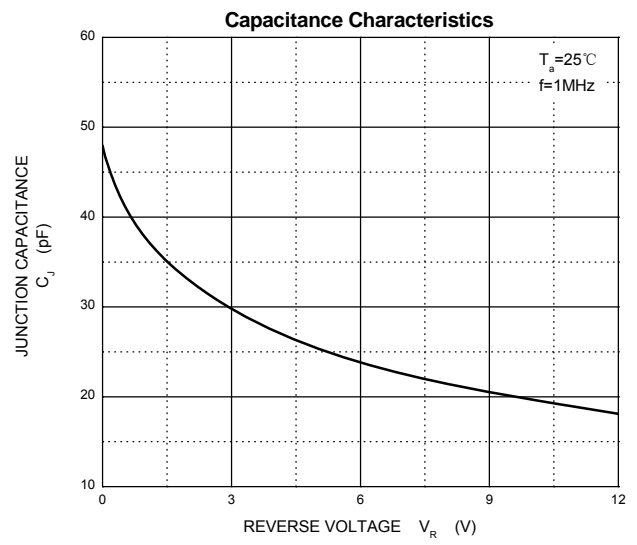
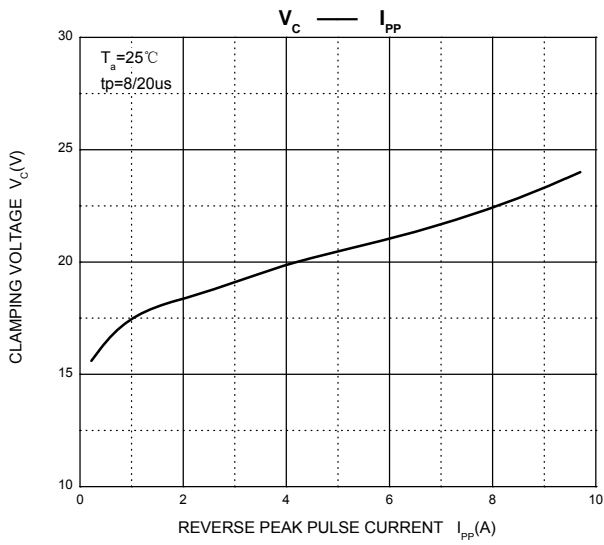
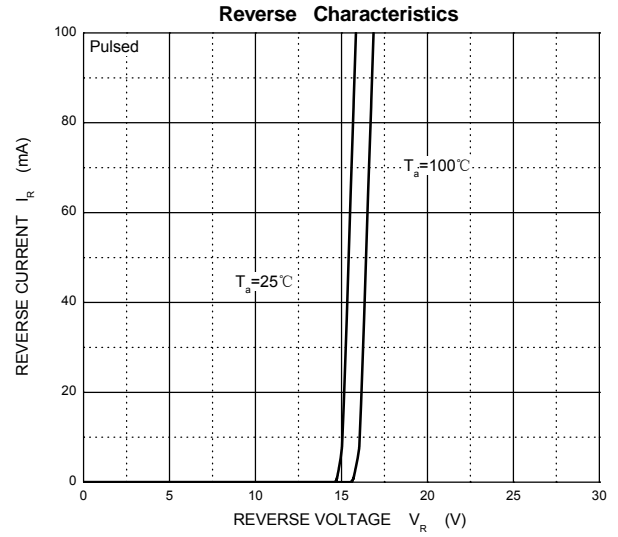
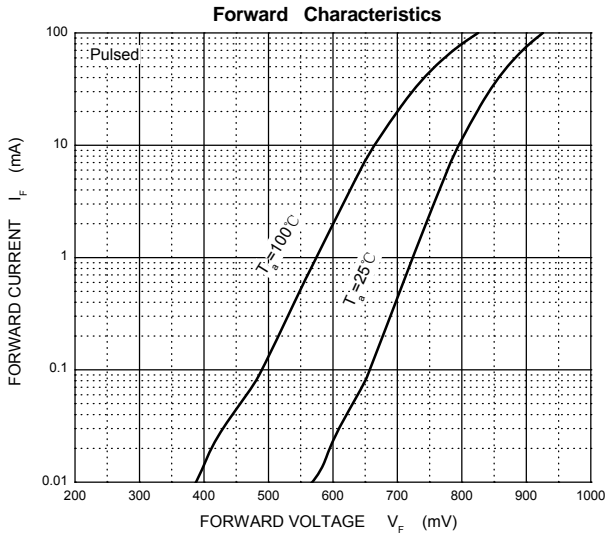
| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|---------------------------|-----------------|--------------------------------|------|-----|------|---------------|
| Reverse stand off voltage | $V_{RWM}^{(1)}$ | | | | 12 | V |
| Reverse leakage current | I_R | $V_{RWM}=12\text{V}$ | | | 1 | μA |
| Breakdown voltage | $V_{(BR)}$ | $I_T=1\text{mA}$ | 13.3 | | 16.5 | V |
| Clamping voltage | $V_C^{(2)}$ | $I_{PP}=9\text{A}$ | | | 24 | V |
| Forward voltage | V_F | $I_F=10\text{mA}$ | | | 0.9 | V |
| Junction capacitance | C_J | $V_R=0\text{V}, f=1\text{MHz}$ | | 45 | | pF |

(1). Other voltages available upon request.

(2). Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5

ESD12VK4

TYPICAL CHARACTERISTICS





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Ordering Information :

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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