

C3V SERIES ELECTRONIC COMPONENT WITH STACKED ELEMENTS

C3V series is an innovative electronic component intended for broadband filtering of electromagnetic interferences (EMI) and suppression of voltage spikes generated in electronic circuits. This high-level dual protection is required or recommended for integration in electrical motors or within corresponding subassemblies, where on/off switching during operation generates inductive loads, further triggering voltage spikes. As a result, broadband electromagnetic interferences (EMI) are generated in the frequency domain, rising noise and disturbance levels, which affect the performance or possibly damage sensitive electronic elements that are integrated near-by in the electrical circuit.

- Operating voltage range Vdc
16, 20, 26, 38 and 56 V
- Capacitance C1 range C
470 nF to 1,5 μ F
- Capacitance C2, C3 range C
1 nF to 100 nF
- Capacitor C1 and C2, C3 temperature characteristics X7R
- Protects against electromagnetic interferences (EMI) and voltage disturbances.
- Dimensional and weight savings on board.
- SMD version.
- Available on tape and reel for automatic insertion equipment.
- RoHS 2 2011/65/EC, REACH, GADSL compliant.
- AEC-Q200 Grade 1 qualified.

CONTINUOUS:

Steady State Applied Voltage:

- DC Voltage Range (Vdc): 16 V to 56 V
- AC Voltage Range (Vrms): 14 V to 40 V

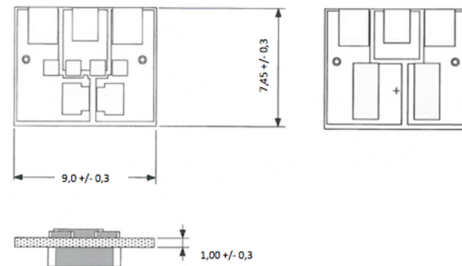
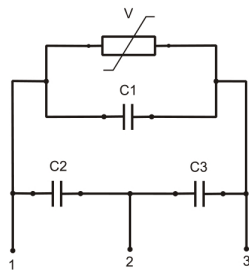


TRANSIENT:

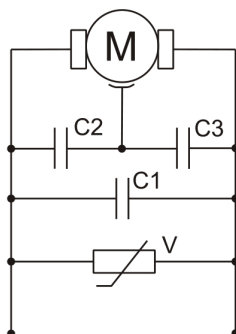
- Load Dump Energy (WLD): 6 J
- Jump Start Capability –
5 minutes (Vjump): 24,5 V to 65 V
- Non-Repetitive Surge Current
8/20 μ s Waveform (Imax): 800 A
- Non-Repetitive Surge Energy
10/1000 μ s Waveform (Wmax): 2,4 J to 4,8 J
- Capacitance C1 Range: 470 nF to 1,5 μ F
- Capacitance C2, C3 Range: 1 nF to 100 nF
- Capacitor Temperature Characteristics: X7R
- Operating Ambient Temperature: 40 °C to 125 °C
- Storage Temperature Range: -40 °C to 150 °C
- Isolation Voltage Capability: > 1,25 kV
- Climatic Category: 40/125/56

ADVANTAGES

- Better results suppressing radiated and conductive emissions in comparison to discrete components
- Very good overcurrent and overvoltage protection
- Combines four passive elements in one component
- Reduces terminals from 8 to 3
- Reduces needed space
- Reduces errors during installing elements
- Reduces time to install elements



SMD SIZE PARAMETERS & SOLDERING PAD CONFIGURATION:



APPLICATION CIRCUITS

Elimination of electromagnetic interferences (EMI) and voltage disturbances generated by DC brush motor:

