Advantage

New Product

Electric vehicles no longer have an engine due to structural changes, so there is no requirement for Load Dump 5A, but surges are still generated by other systems (ECU) and often occur in complex vehicle environments. When electrical appliances that consume large amounts of power, such as power windows, starting motors to turn on or off the power, or switch in the car, or line failures, surges will occur. Automotive electronic products are quite weak in surges ability special for the precision electronic products such as stereos and trip computers. These products use a large number of microelectronics components inside, and microelectronics components are easily damaged by surges, so how to protect these precision electronic products from surges Destruction has become a very important issue

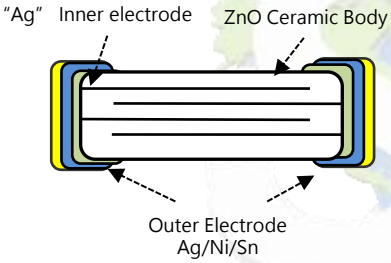
Features

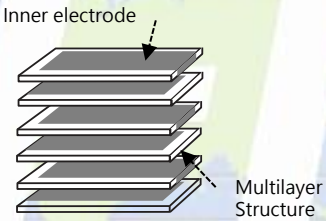
1.SMD type to save space (**0806**)
2.DC 16V/32V/43V/48V/60V
3.Meet AEC-Q200 Rev-C requirement
4.Ultra low leakage current
5.Good high temperature characteristic
(-40°C~125°C)
6. Bidirectional clamping function

Pass Standard

1. Pass ISO7637-2 /12V System
Pulse 1 Level 4.
(Us -150V, Ri :10 ohm , Td: 200ms)
Clamping Voltage under 60V)
2. Pass ISO7637-2 /24V System
Pulse 1 Level 4.
(Us -600V, Ri :50 ohm , Td: 200ms)
Clamping Voltage under 80V)
3. Pass ISO16750 **Load Dump 5b**
(Us 35V/65V, Ri :0.5 ohm , Td: 400ms)
4.DC **18V / 24V for 60** minutes

Structure

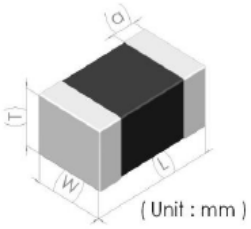




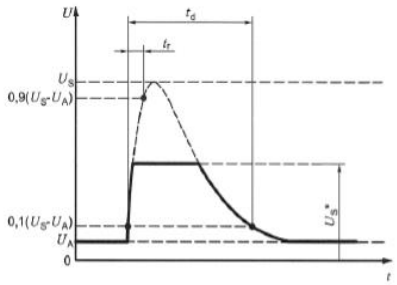
Application

1. Power train System
2. Safety System
3. Comfort System
4. Driver Assistant System
5. Security System
6. Hybrid Electrical
7. Other ECU

Model	0806 Series
Length(L)	2.20±0.20
Width(W)	1.70±0.20
Thickness(T)	1.80 max.
Termination(a)	0.40 +0.15/-0.20



ISO16750 Pulse 5b



ISO16750 pulse 5B

Parameter	12V System
Pulse Voltage Us	79~101V
Supply Voltage U_A	13.5V
Output Resistance Ri	0.5Ω
Pulse Voltage with Load Dump Suppression Us*	35
Pulse Width td	400ms
Rise Time tr	5~10ms

ISO16750 pulse 5B

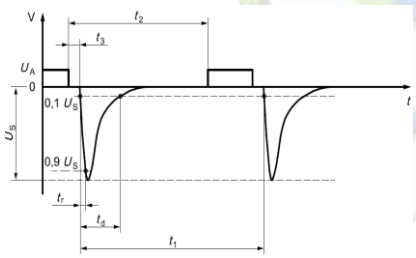
Parameter	24V System
Pulse Voltage Us	151~202V
Supply Voltage U_A	28V
Output Resistance Ri	1Ω
Pulse Voltage with Load Dump Suppression Us*	65
Pulse Width td	350ms
Rise Time tr	10ms

Specification

Specification	Working Voltage	Breakdown Voltage	Maximum peak voltage (pulse 1) (500 times)	Maximum allowable clamping voltage	Maximum allowable clamping voltage (pulse 1)
(Unit)	VDC (max)	1mA	V	8/20μs (A)	V
SFI0806EV280-L4	16V	27~30	-150	45	60
SFI0806EV450-L4	32V	43~47	-600	66	80
SFI0806EV550-L4	43V	54~59	-600	80	110
SFI0806EV600-L4	48V	59~65	-600	90	120
SFI0806EV720-L4	60V	71~78	-600	105	140

Specification	Jump start Voltage 5min	Overvoltage withstand voltage	Maximum peak voltage (pulse 1) (500 times)	Standard
(Unit)		60min.	V	Meet AECQ200
SFI0806EV280-L4	30V	18	-150	
SFI0806EV450-L4	46V	36	-600	
SFI0806EV550-L4	57V	36	-600	
SFI0806EV600-L4	62V	36	-600	
SFI0806EV720-L4	74V	36	-600	

Clamping Voltage ISO7637-2 Pulse 1



ISO7637-2 2011(E). Pulse 1 Level 4/12V	
Ua	16V
Ud	-150V
Ri	10Ω
Td	2ms
Tr	1 us
T2	200ms

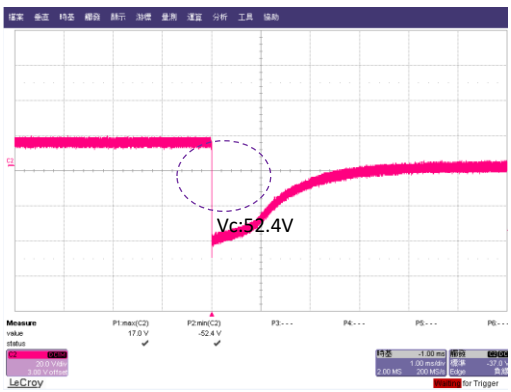
ISO7637-2 2011(E). Pulse 1 Level 4 /24V	
Ua	27V
Ud	-600V
Ri	50Ω
Td	2ms
Tr	1 us
T2	200ms

After 500 pulses test Clamping Voltage<60V

After 500 pulses test Clamping Voltage<80V

Chart of Clamping Voltage ISO7637-2 Pulse 1

SFI0806EV280-L4



SFI0806EV450-L4