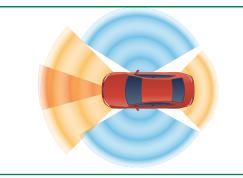


AEC-Q101-QUALIFIED TVS DIODES & DIODE ARRAYS

Examples of automotive applications and approved TVS Diodes & Diode Arrays

Advanced Driver Assistance Systems

- Night Vision
- Pedestrian Avoidance
- Lane Departure Sensing
- Adaptive Cruise Control
- Vehicle to Vehicle (V2V) Communication
- Interior Camera Driver Monitoring
- Exterior Camera Front View
- Exterior Camera Rear View Park Assist
- Blind Spot Detection
- Side Impact Assist
- Automated Head Light Control



Communication & Infotainment Systems

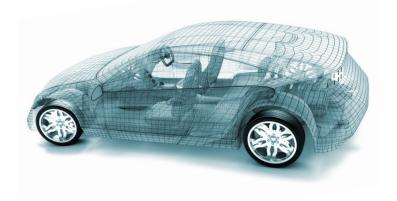
- Radio
- Power Audio
- GPS Module
- Satellite Navigation
- Portable Navigator
- Navigation System
- Telematics Box
- Car Multimedia

New Energy Car

- Gas Electric
- Fuel Cell Electric
- Diesel Electric
- Lilon Polymer
- Ultracapacitors
- Battery Management System (BMS)



* The marks FlexRay, MOST, Bluetooth, Safe-By-Wire and Selespeed are the properties of their respective owners.



Network Systems & Body

- CAN BUS
- LIN BUS
- FlexRay*
- MOST*
- Bluetooth*
- Safe-By-Wire*
- Central Body Module
- Lighting

- Wiper
- Power Window
- Retracting Mirror
- Dashboard
- Climate Control
- Keyless Entry
- Seat Control
- Park Assistance

Chassis & Safety Systems

- Active Suspension
- Tire Pressure Monitoring System (TPMS)
- Electric Power Steering (EPS)
- Seat Belt Pretensioning
- Precrash
- Battery Disconnect
- Antirollover
- Stability Control
- Brake Control
- DC Power Supply
- Air Bag
- ABS
- Radar

Powertrain Systems

- Automatic Cruise Control (ACC)
- Electronics Control Unit (ECU)
- Turbo Charger
- Selespeed*
- Transmission Control Unit (TCU)
- Battery Charging
- Injection
- GDI



AEC-Q101-QUALIFIED TVS DIODES & DIODE ARRAYS

Examples of automotive applications and approved TVS Diodes & Diode Arrays

AEC-Q101 Qualified TVS Diode (Meets ISO7637-2 and ISO16750-2)

ALO GIO		oa . .			40	1	000	<u> </u>	,			ч	u				_,													
Series Name	Package Type	Power Rating (10/1000µs)	12V SYSTEM									24V SYSTEM																		
			1	2a	2b	3a	3b	5a	5b	1	2a	2b	3a	3b	5a	5b	1	2a	2b	3a	3b	5a	5b	1	2a	2b	3a	3b	5a	5b
			-75v	37v	10v	-112v	75v	65v	65v	-100v	112v	10v	-220v	150v	87v	87v	-300v	37v	20v	-150v	150v	123v	123v	-600v	112v	20v	-300v	300v	173v	173v
Automotiv	Automotive Transient Surge Including Load Dump Protection																													
TPSMA6L	D0-221AC	600W	Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass		
TPSMB	D0-214AA (SMB)	600W	Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass		
TPSMC	DO-214AB (SMC)	1500W	Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass		
TPSMD	D0-214AB (SMC)	3000W	Pass	Pass	Pass	Pass	Pass		*Pass	Pass	Pass	Pass	Pass	Pass		*Pass	Pass	Pass	Pass	Pass	Pass		*Pass	Pass	Pass	Pass	Pass	Pass		*Pass
TP6KE	D0-15	600W	Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass			Pass	Pass	Pass	Pass	Pass		
SLD (or Load Dump)	P600	2200W Load Dump						Pass	Pass						Pass	Pass						Pass	Pass						Pass	Pass

Note: * denotes the conditional pass which depends on the value of the Us as required by the customer requirement. If Us value is high, then it may not pass the 5b test. Please contact Littelfuse Tech support team regarding the test condition.

AEC-Q101 Qualified TVS Diode Arrays (SPA® Diodes)

Series Name	Package	Capacitance (pF)	Clamping Voltage	Working Voltage (VDC)	Number of Channels	ESD Rating (Contact Discharge, IEC61000-4-2)	Maximum Surge Rating (tp=8/20μs)	AEC-Q101 Qualified
eneral Purpose ESD Pro	otection (Discretes and Arra	ıy)						
SP1001	SC70-3	8	8.0V at 1A	5.5	2/4/5	15kV	2A	•
SP1003	SOD882	30	12.0V at 7A	5.0	1	30kV	7A	•
SP1005	0402 (SOD882)	30	9.3V at 1A	6.0	1	30kV	10A	•
SDxx	S0D323	50-350	9.8-50V at 1A	5-36	1	30kV	5-30A	•
SDxx-C	S0D323	30-260	10-52V at 1A	5-36	1	30kV	5-30A	•
SM24CANA	S0T23-3	11	36V at 1A	24.0	2	24kV	3A	•
SM24CANB	S0T23-3	30	34V at 1A	24.0	2	30kV	10A	•
SM712	S0T23-3	75	11V at 1A	-7-12	2	24kV	19A	•
SPHVxx	SOD882, SOD882 with side lead exposure	25-60	19-52V at 1A	12-36	1	30/30/24/15 kV	2-8A	•
SPHVxx-C	SOD882, SOD882 with side lead exposure	13-30	19-52V at 1A	12-36	1	30/24/17/13kV	2-8A	•
SMxx	S0T23-3	65-400	9.8-36V at 1A	5.0	2	30kV	7-24A	•
w Capacitance ESD Pr	otection (Discretes and Arra	ay)						
SP1255P	μDFN-6	0.5	6.6V at 1A	12.0	3	30kV	4A	•
SP3014	μDFN6L	1.0	6.6V at 1A	5.0	2	15kV	8A	•
SP3022	0402 (SOD882)	0.35	12V at1A	5.3	1	20kV	3A	•
SP0524P	μDFN10	0.5	6.6V at 1A	5.0	4	12kV	4A	•
SP3012	μDFN14, μDFN10	0.5	6.6V at 1A	5.0	4/6	12kV	4A	•
SP3030	0402 (SOD882)	0.5	9.2V at 1A	5.0	1	20kV	3A	•
SP3003	μDFN6L	0.65	10V at 1A	6.0	2/4/8	8kV	2.5A	•
SP5001	TDFN10	0.8	-	5.0	4	15kV	-	•
SP5002	TDFN16	0.8	-	5.0	6	15kV	-	•
SP5003	TDFN10	0.8	-	5.0	4	15kV	-	•
SESD Ultra Low Cap. TVS RF2192, RF2193, RF2943, RF2945	0201 μDFN, 0402 μDFN	0.1-0.2	9.2-10V at 2A	9-9.8	1	20kV	2A	•
SD Ultra Low Cap. Diode Arrays RF2946, RF3076, RF3077, RF3078	0402 μDFN, 0802 μDFN, 1004 μDFN, 1103 μDFN	0.2	9.2V at 2A	9.0	2/4/6	20kV	2A	•
ghtning Surge Protecti	on (Discretes and Array)							
SP3051	S0T23-6	3.8	9V at 1A	6	4	30kV	20A	•
SP3312T	μDFN08	1.3	6V at 1A	3.3	1	30kV	15A	•
SP4022	S0D323	1.3	19V at 1A	12	1	30kV	15A	•
SP4023	S0D323	1.3	23V at 1A	15	1	30kV	12A	•
SP4024	S0D323	1.3	34V at 1A	24	1	30kV	7A	•
SP2574N	μDFN10	3.8	4.5V at 1A	2.5	-	30kV	40A	•
SLVU2.8-8	SOIC	2.6	17V at 24A	2.8	8	30kV	30A	•