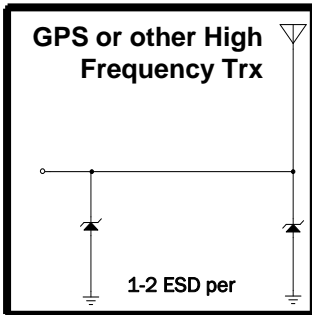
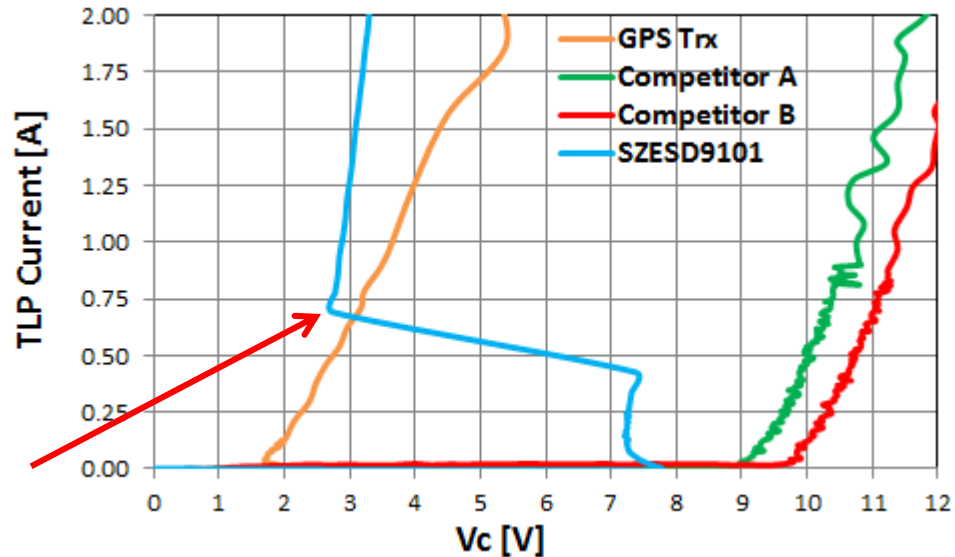


Antenna Protection: 2017 New Product

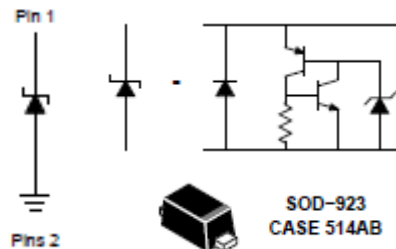
SZESD9101: 25kV Contact, Low Voltage, Low CAP SCR ESD Development



Lowest clamping voltage and early turn-on protects the most sensitive transceivers in the market



Released!



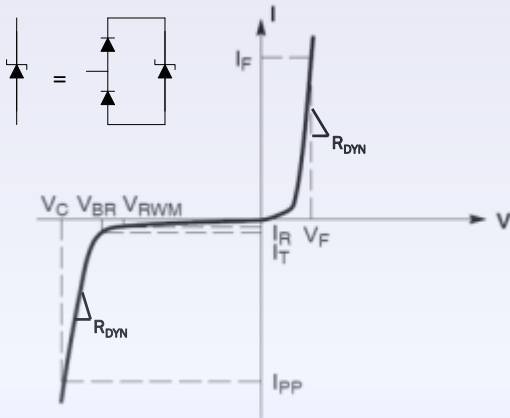
Key Advantages

- Low Voltage SCR, Low CAP Benefits
 - ✓ SCR technology → Lowest clamping voltage
 - ✓ <0.5pF CAP for no signal distortion
 - ✓ Latchup-free for use in GPS & other 5V antennas

ESD Solutions Technology

New technology!

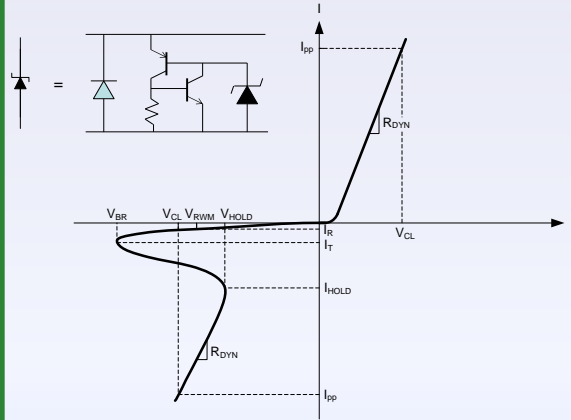
ON Semi ESD7000 series (Zener based ESD protection)



$$V_c = V_{BR} + I_{pp} \times R_{DYN}$$

Zener based technology has **higher Vbr** limiting it to chipsets greater than 45nm

ON Semi ESD8000 series (SCR* based ESD protection)

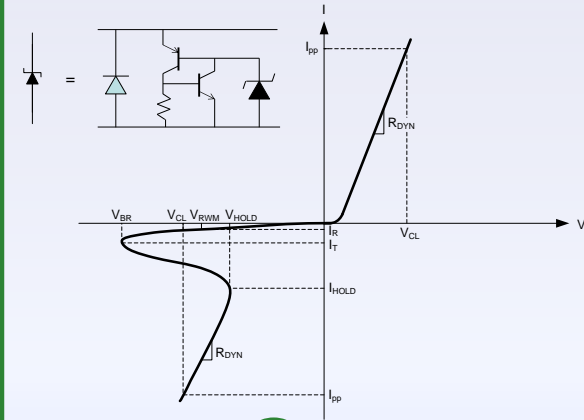


$$V_c = V_{HOLD} + I_{pp} \times R_{DYN}$$

8000 series SCR technology's key advantage is **low Vhold**. Deeper snapback results in lower voltage over high currents.

8000 SCR = Silicon Controlled Rectifier
Optimized for industry leading protection
against hard failures

ON Semi ESD9000 series (SCR based ESD protection)

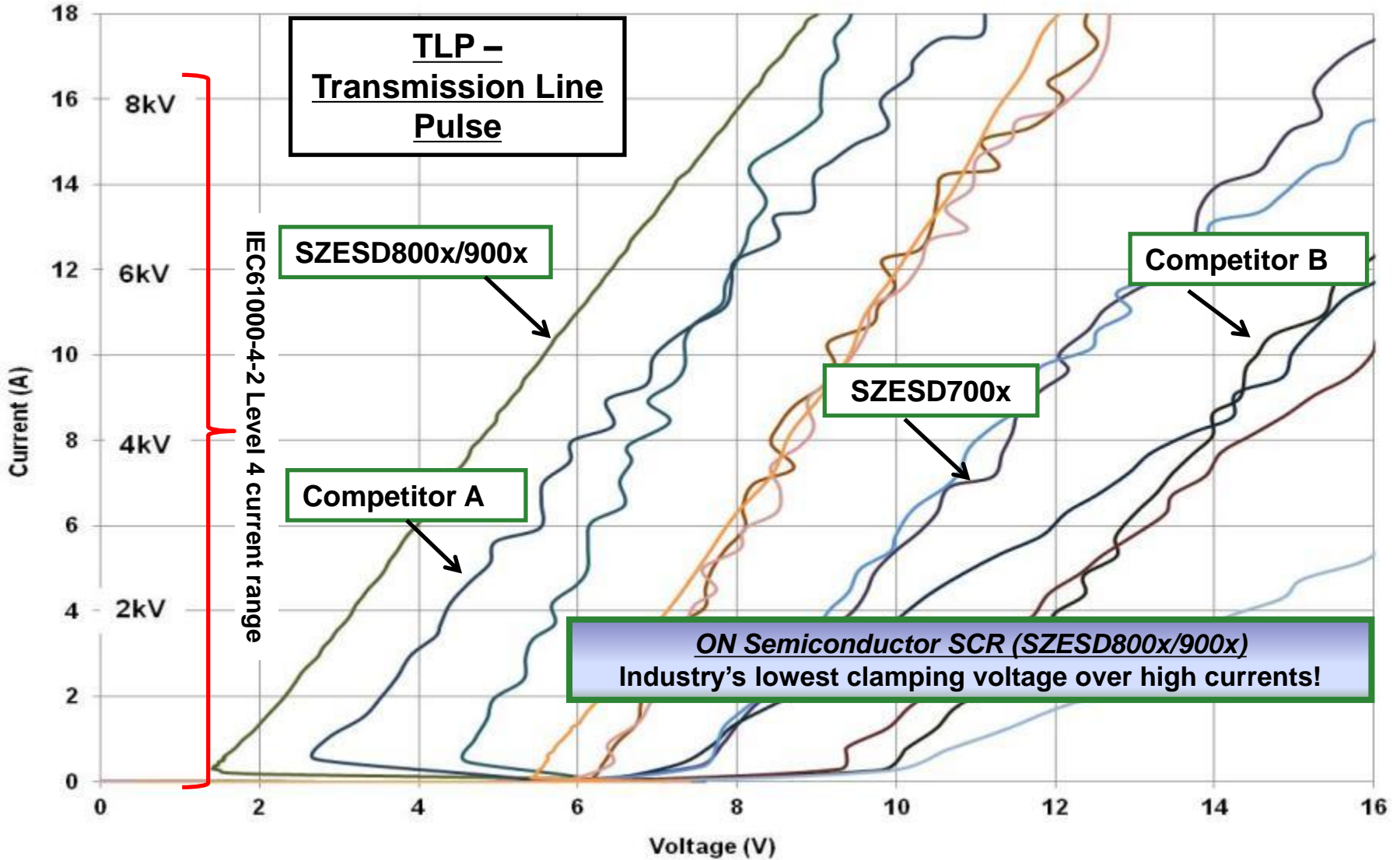


$$V_c = V_{BR} + I_{pp} \times R_{DYN}$$

9000 series SCR key advantage is improved **turn-on speed**. Earlier turn-on results in lower initial peak voltage clamping with same benefits as 8000 series SCR

9000 SCR = Silicon Controlled Rectifier
Optimized for industry leading protection
against soft and hard failures

ESD Clamping Performance Using TLP



Single Line Protection Devices – Low Cap, High ESD

for Antennas/RF Lines



SOD-323



SOD-523



SOD-923



SOD-882

	SZESD7361HT1G	SZESD7361XV2T1G	SZESD7361P2T5G	SZESD7462N2T5G
Max Vrwm [V]	16.0	16.0	16.0	16.0
Min Vbr [V]	16.5	16.5	16.0V	16.5
Typ Rdyn [Ω]	0.74	0.74	STB	1.05
Max Cap [pF]	0.55	0.55	0.55	0.55
ESD Contact [kV]	15.00	15.00	15.00	18.00
Polarity	Uni-Directional	Uni-Directional	Uni-Directional	Bi-Directional
	SZESD7371HT1G	SZESD7371XV2T1G	SZESD7371P2T5G	SZESD7571N2T5G
Max Vrwm [V]	5.30	5.30	5.30	5.30
Min Vbr [V]	7.00	7.00	5.0V	7.00
Typ Rdyn [Ω]	0.45	0.45	5.0V	0.80
Max Cap [pF]	0.70	0.70	0.70	0.35
ESD Contact [kV]	20.00	20.00	20.00	20.00
Polarity	Uni-Directional	Uni-Directional	Uni-Directional	Bi-Directional
	SZESD8351HT1G	SZESD8351XV2T1G	SZESD9101P2T5G	SZESD8551N2T5G
Max Vrwm [V]	3.30	3.30	5.00	3.30
Min Vbr [V]	5.00	5.00	5.0V	5.00
Typ Rdyn [Ω]	0.62	0.62	SCR	0.84
Max Cap [pF]	0.50	0.50	SCR	0.30
ESD Contact [kV]	15.00	15.00	25.00	15.00
Polarity	Uni-Directional	Uni-Directional	Uni-Directional	Bi-Directional
	SZESD7351HT1G	SZESD7351XV2T1G	SZESD7351P2T5G	SZESD7551N2T5G
Max Vrwm [V]	3.30	3.30	3.30	3.30 / 5.0
Min Vbr [V]	5.00	5.00	5.00	5.00
Typ Rdyn [Ω]	0.35	0.35	3.3V	0.55
Max Cap [pF]	0.60	0.60	0.60	0.35
ESD Contact [kV]	20.00	20.00	20.00	25.00
Polarity	Uni-Directional	Uni-Directional	Uni-Directional	Bi-Directional

