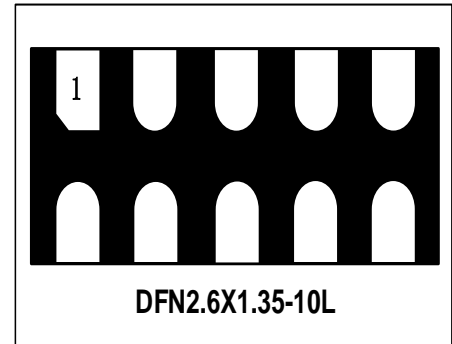


### Features

- Two Differential Channels Common-Mode EMI Filter with Integrated ESD Protection
- High differential mode attenuation on WLAN frequencies :  
-20dB at 2.4GHz and -30dB at 5.0GHz
- Large Differential Mode Bandwidth with Cutoff Frequency: 1.7 GHz
- High Common Mode Stop Band Attenuation
- Provides ESD Protection to IEC61000-4-2 Level 4,  $\pm 15$  kV Contact Discharge
- Low Channel Input Capacitance Provides Superior Impedance Matching Performance
- Low Channel Resistance: 6.0  $\Omega$
- Maximum Package Height: 0.5 mm



### IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 20$ kV (air),  $\pm 15$ kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 $\mu$ s)

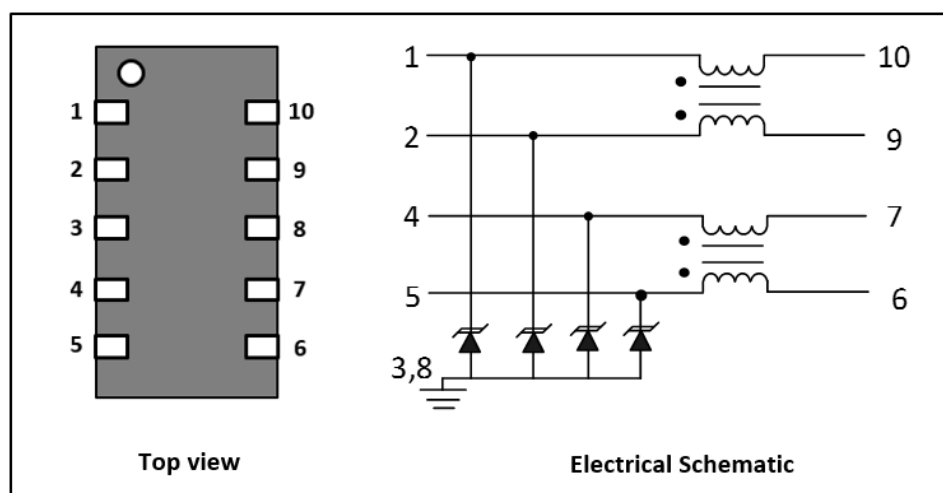
### Mechanical Characteristics

- 1.35 x 2.6 mm DFN-10L package
- Pb-Free Package Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

### Applications

- HDMI Stick
- Set top box, Streaming box
- Game console
- Notebook, laptop, Portable devices

### Schematic & PIN Configuration



## Pin Description

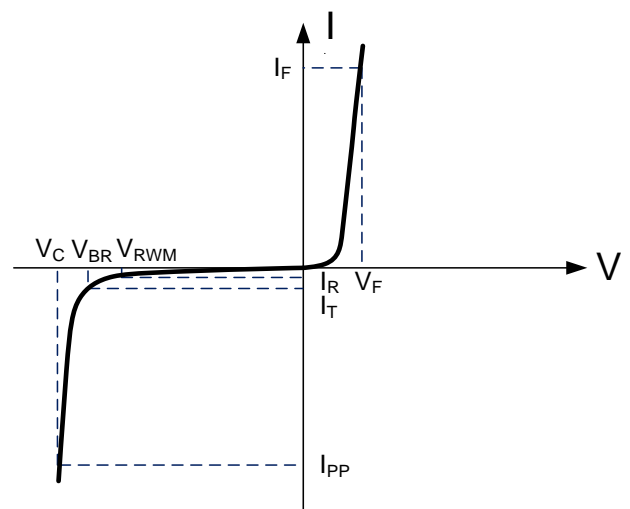
PIN number	Description	PIN number	Description
1	In_1+ (to Connector)	6	Out_2- (to IC)
2	In_1- (to Connector)	7	Out_2+ (to IC)
3	GND	8	GND
4	In_2+ (to Connector)	9	Out_1- (to IC)
5	In_2- (to Connector)	10	Out_1+ (to IC)

## Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	60	Watts
ESD Discharge IEC61000-4-2 Contact Discharge	$V_{PP}$	$\pm 15$	kV
DC Current per Line	$I_{LINE}$	100	mA
Operating Temperature	$T_J$	-55 to + 85	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}C$

## Electrical Parameters (T=25 $^{\circ}C$ )

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



## Electrical Characteristics

WECM5411P						
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	5.6		9	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5V, T=25^{\circ}C$			500	nA
Forward Voltage	$V_F$	$I_F=10mA$	0.5		1.5	V
Channel Input Capacitance to Ground(Pins 1, 2, 4, 5 to Pins 3, 8)	$C_{IN}$	$V_R=0V, f=2.5GHz\sim6GHz$		0.35	0.45	pF
Clamping Voltage	$V_C$	$I_{PP}=4A, t_p=8/20\mu s$		10	15	V
ESD Clamping Voltage <sup>1</sup>	$V_C$	$I_{PP}=4A$ $t_p=0.2/100ns$		9.5		V
ESD Clamping Voltage <sup>1</sup>	$V_C$	$I_{PP}=16A$ $t_p=0.2/100ns$		15.5		V
Dynamic Resistance <sup>1,2</sup>	$R_{DYN}$	TLP=0.2/100ns I/O to Gnd		0.5		$\Omega$
Channel Resistance(Pins 1-10, 2-9, 4-7 and 5-6)	$R_{CH}$			6.0		$\Omega$
Differential Mode Cut-off Frequency	$f_{-3dB}$	50 $\Omega$ Source and Load Termination		1.7		GHz
Common Mode Stop Band Attenuation	$F_{atten}$	@ 1G MHz		15		dB

**Note:**

- 1、 TLP Setting :  $t_p=100ns, t_r=0.2ns, I_{TLP}$  and  $V_{TLP}$  sample window: $t_1=70ns$  to  $t_2=90ns$ .
- 2、 Dynamic resistance calculated from  $I_{PP}=4A$  to  $I_{PP}=16A$  using "Best Fit"

Typical Characteristics

Figure 1: Differential Mode Attenuation vs.Frequency

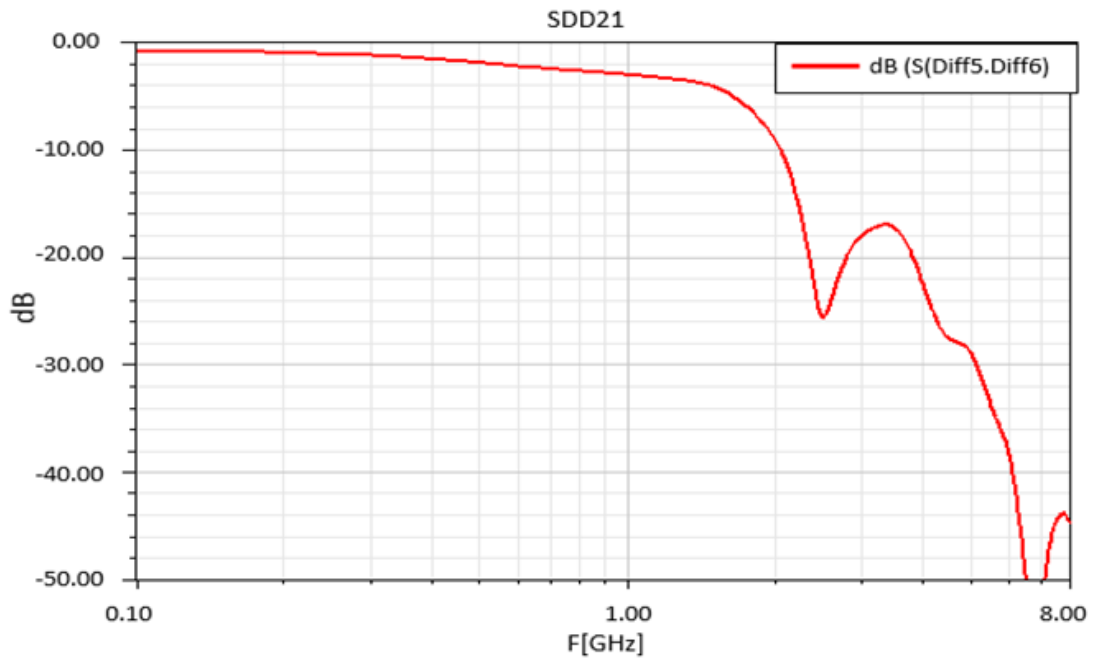


Figure 2: Common Mode Attenuation vs.Frequency

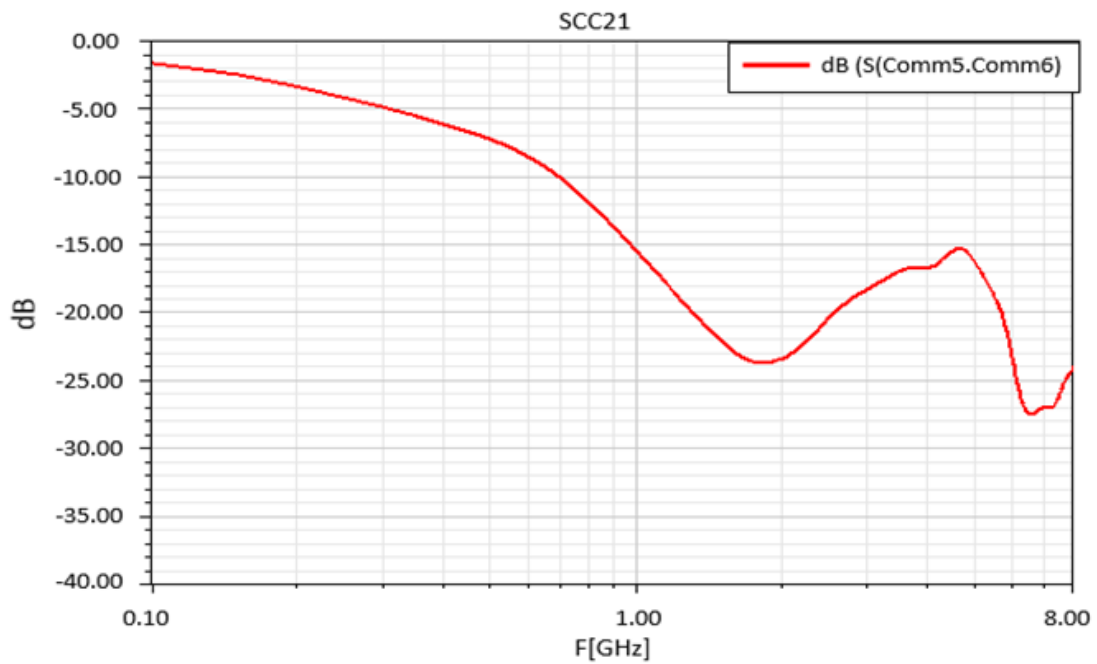


Figure 3: Peak Pulse Power vs. Pulse Time

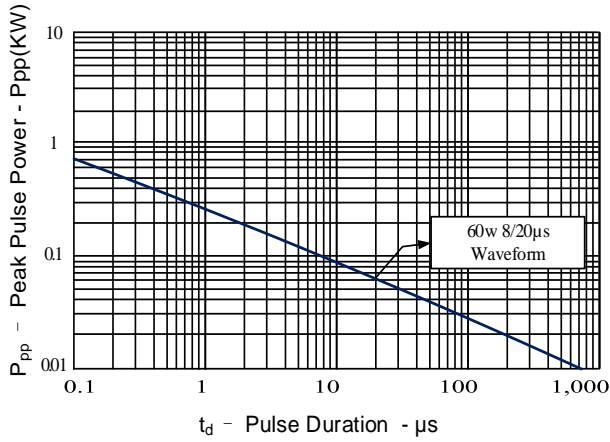


Figure 4: Power Derating Curve

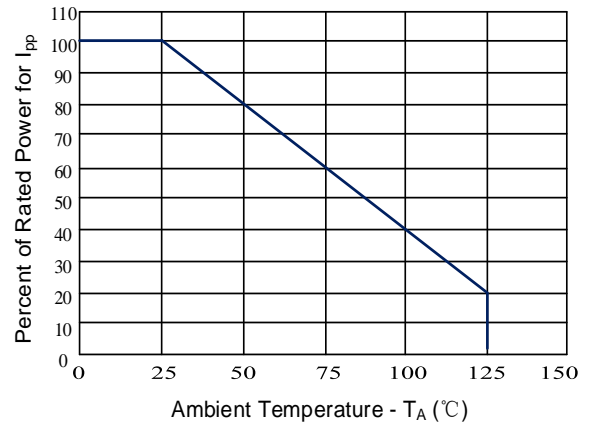


Figure 5: Pulse Waveform

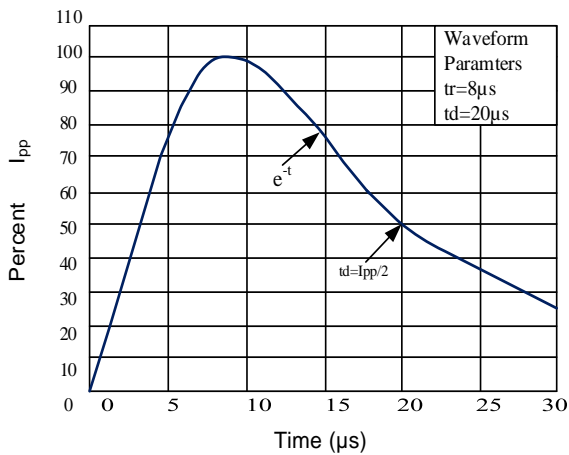


Figure 6: Clamping Voltage vs. Peak Pulse Current

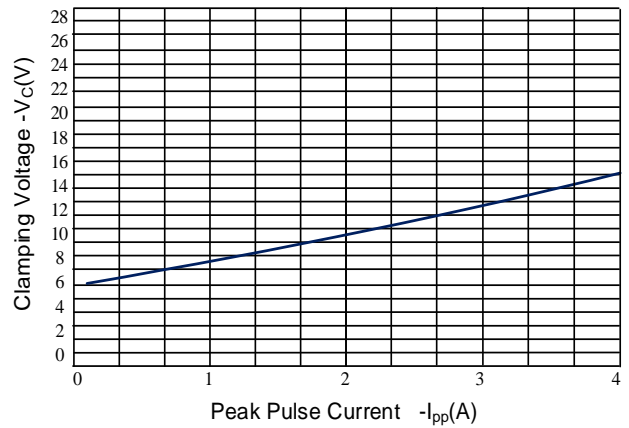


Figure 7: Capacitance vs. Reverse Voltage

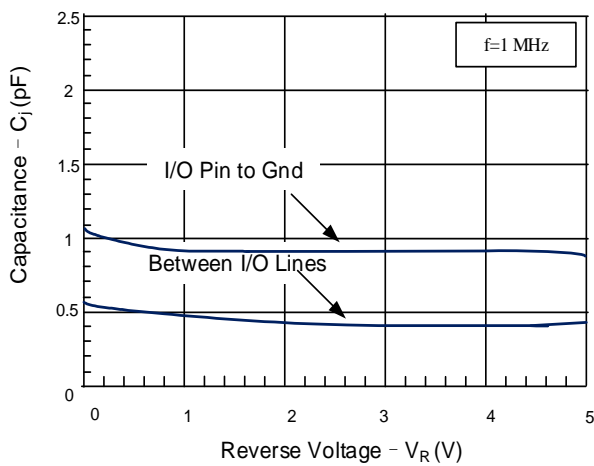
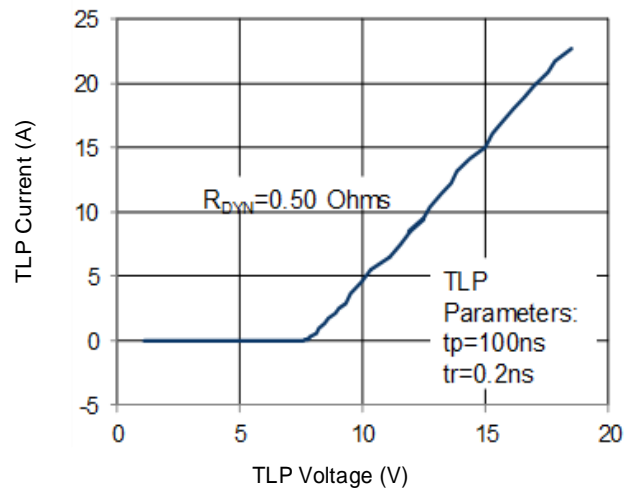
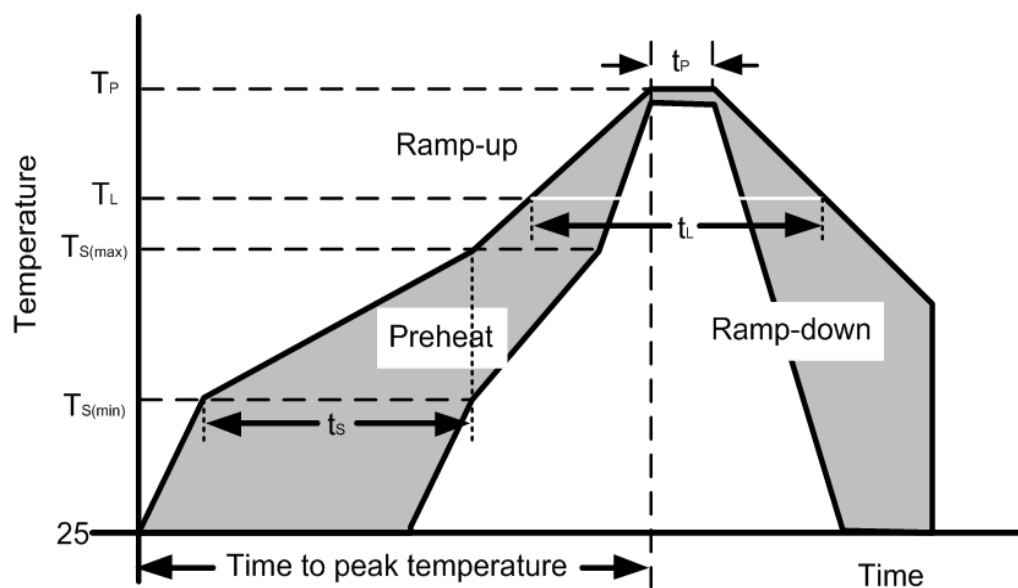


Figure 8: TLP I-V Curve



## Soldering Parameters

Reflow Condition		Pb – Free assembly
Pre Heat	Temperature Min ( $T_{S(min)}$ )	150°C
	Temperature Max ( $T_{S(max)}$ )	200°C
	Time (min to max) ( $t_s$ )	60 – 190 secs
Average ramp up rate (Liquidus Temp) ( $T_L$ ) to peak		5°C/second max
$T_{S(max)}$ to $T_L$ —Ramp-up Rate		5°C/second max
Reflow	Temperature ( $T_L$ ) (Liquidus)	217°C
	Temperature ( $t_L$ )	60 – 150 seconds
Peak Temperature ( $T_P$ )		260+0/-5 °C
Time within actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		5°C/second max
Time 25°C to peak Temperature ( $T_P$ )		8 minutes Max.
Do not exceed		280°C



Outline Drawing –DFN-10L

Technical drawing showing top, side, and pin array views of the DFN-10L package. Dimensions include A, D, E, A1, C, L, b, and e. A laser mark 'O' is shown for PIN1. A seating plane is indicated.

DFN2.6X1.35-10L

SYMBOL	MILLIMETERS		
	MIN	NOM	MAX
A	0.45	0.50	0.55
A1	0.00	0.02	0.05
b	0.15	0.20	0.25
D	2.55	2.60	2.65
E	1.30	1.35	1.40
e	0.50 BSC		
L	0.40	0.50	0.60

NOTES:  
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).

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Footprint (dimensions in mm)

NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.

Marking Codes

Part Number	WECM5411P
Marking Code	

Package Information

Qty: 3k/Reel

CONTACT INFORMATION

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WAYON website: <http://www.way-on.com>

For additional information, please contact your local Sales Representative.

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Specifications are subject to change without notice.  
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
Users should verify actual device performance in their specific applications.

单击下面可查看定价，库存，交付和生命周期等信息

[>>WAY-ON\(维安\)](#)