



SAW Components

SAW duplexer

LTE band XXVIII Block A

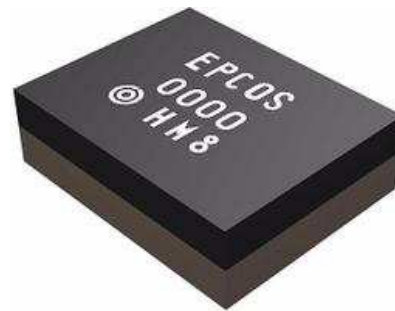
Series/type:	B8528
Ordering code:	B39771B8528P810
Date:	February 07, 2014
Version:	2.0

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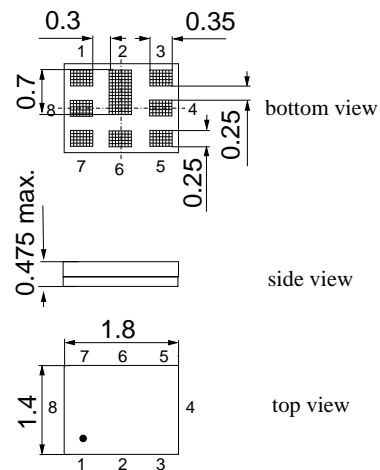
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Application

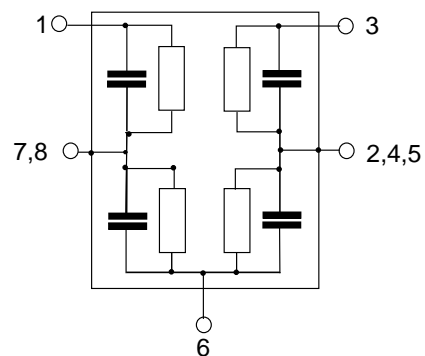
- Low-loss SAW duplexer for mobile telephone LTE Band XXVIII systems
- Low insertion attenuation
- Usable passband 30 MHz
- Duplexer for lower part of Band XXVIII (Block A)
- Companion type is B8530 for upper Band XXVIII (Block B)


Features

- Package size 1.8 x 1.4mm², package height 0.475mm max.
- RoHS compatible
- Approximate weight 0.0042 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitive Level 3**


Pin configuration

- 1 RX output
- 3 TX input
- 6 Antenna
- 2,4,5,7,8 Ground



Please read *cautions and warnings and important notes* at the end of this document.

Data Sheet

Characteristics

Temperature range for specification:	T = -30 °C to +85 °C
ANT terminating impedance:	Z _{ANT} = 50 Ω 7.5 nH
TX terminating impedance:	Z _{TX} = 50 Ω + 4.0 nH (series)
RX terminating impedance:	Z _{RX} = 50 Ω

Characteristics Tx - Ant					min.	typ. @ 25 °C	max.	
Center frequency	f _C				—	718.0	—	MHz
Maximum insertion attenuation	α	703.240...	732.760MHz			1.8	3.1	dB
Amplitude ripple	α	703.240...	732.760MHz			1.0	2.3	dB
VSWR								
TX port		703.0	... 733.0	MHz		1.7	2.1	
ANT port		703.0	... 733.0	MHz		1.7	2.0	
Attenuation	α							
		10.0	... 670.0	MHz	30	36		dB
		670.0	... 694.0	MHz	30	36		dB
		694.0	... 695.0	MHz	20	38		dB
		695.0	... 698.0	MHz	3	26		dB
		695.0	... 698.0	MHz	5 ¹⁾	26		dB
		758.240...	787.760MHz		43	48		dB
		788.0	... 803.0	MHz	30	38		dB
		859.0	... 894.0	MHz	30	36		dB
		1225.0	... 1250.0	MHz	35	42		dB
		1406.0	... 1466.0	MHz	34	38		dB
		1559.0	... 1563.0	MHz	32	36		dB
		1565.42	... 1573.374MHz		31	36		dB
		1573.374...	1577.466MHz		30	35		dB
		1577.466...	1585.42	MHz	30	35		dB
		1597.55	... 1605.89	MHz	30	35		dB
		1805.0	... 1880.0	MHz	30	34		dB
		1930.0	... 1995.0	MHz	30	34		dB
		2010.0	... 2025.0	MHz	30	34		dB
		2109.0	... 2199.0	MHz	30	34		dB
		2400.0	... 2484.0	MHz	28	33		dB
		2570.0	... 2620.0	MHz	28	33		dB
		2812.0	... 2932.0	MHz	15	32		dB
		4900.0	... 5950.0	MHz	15	22		dB

1) T = +15 °C to +70 °C

Data Sheet

Characteristics

Temperature range for specification:	T = -30 °C to +85 °C
ANT terminating impedance:	Z _{ANT} = 50 Ω 7.5 nH
TX terminating impedance:	Z _{TX} = 50 Ω + 4.0 nH (series)
RX terminating impedance:	Z _{RX} = 50 Ω

Characteristics Rx - Ant				min.	typ. @ 25 °C	max.	
Center frequency	f _C			—	773.0	—	MHz
Maximum insertion attenuation	α	758.240... 787.760MHz			1.8	3.0	dB
Amplitude ripple	α	758.240... 787.760MHz			0.5	1.8	dB
VSWR							
RX port		758.0 ... 788.0 MHz			1.7	2.1	
ANT port		758.0 ... 788.0 MHz			1.6	2.0	
Attenuation	α						
		1.0 ... 699.0 MHz		40	62		dB
		45.0 ... 65.0 MHz		50	70		dB
		703.0 ... 733.0 MHz		50	59		dB
		733.0 ... 748.0 MHz		30	34		dB
		814.0 ... 3000.0 MHz		40	44		dB
		3000.0 ... 6000.0 MHz		26	32		dB
Characteristics TX - RX				min.	typ. @ 25 °C	max.	
Isolation	α						
		703.240... 732.760MHz		55	59		dB
		758.240... 787.760MHz		50	54		dB

Maximum ratings

Storage temperature range	T_{stg}	-40/+85 ¹⁾	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100 ²⁾	V	machine model, 10 pulses
ESD voltage	V_{ESD}	300 ³⁾	V	HBM,+/- 1 pulses
ESD voltage	V_{ESD}	600 ⁴⁾	V	CDM,+/- 3 pulses
Input power at	P_{IN}			
703.240 ... 732.760 MHz		27	dBm	} continuous wave 50 °C, 5000 h
elsewhere		10	dBm	

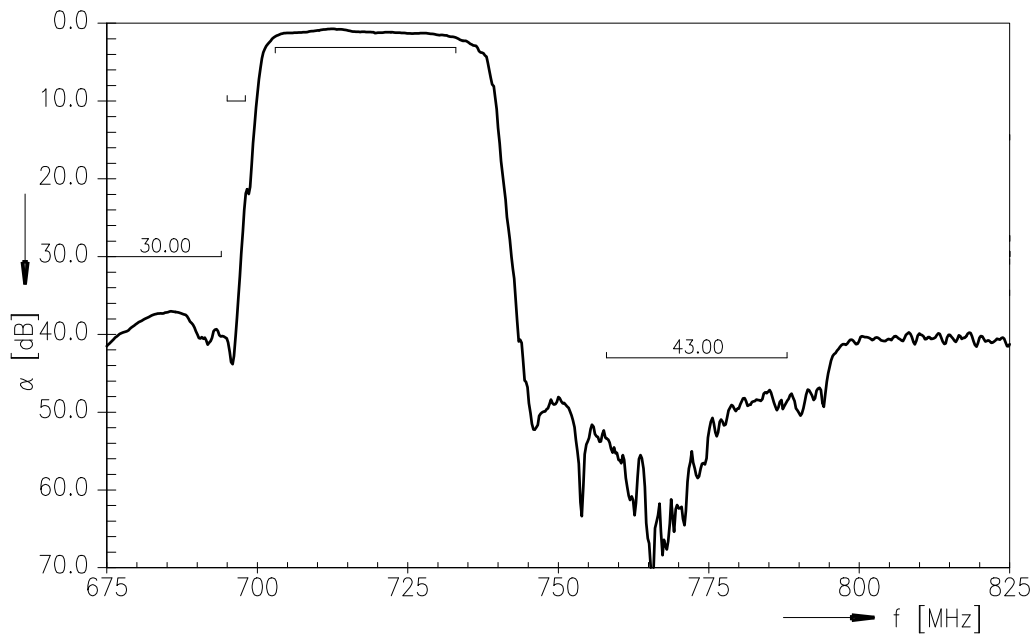
1) Extended upperlimit: 168 @ 125 °C acc. to IEC 60068-2-2 Bb.

2) acc. to JESD22-A115B (machine model), 10 negative & 10 positive pulses.

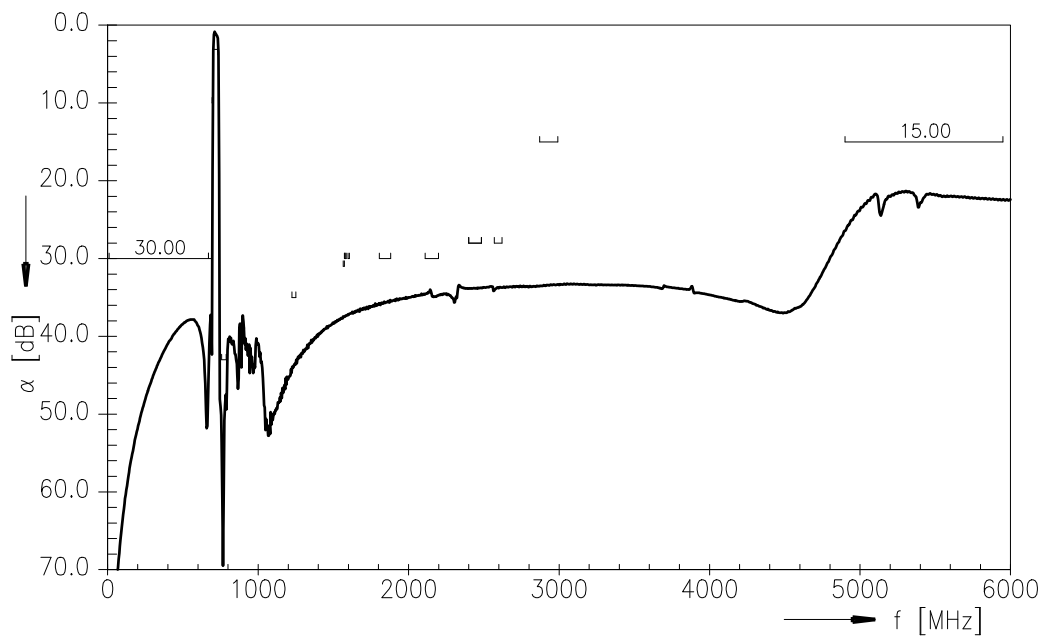
3) acc. to JESD22-A114F (human body model), 1 negative & 1 positive pulses.

4) acc. to JESD22-A101C (charge device model), 3 negative & 3 positive pulse

Frequency response Tx-Antenna

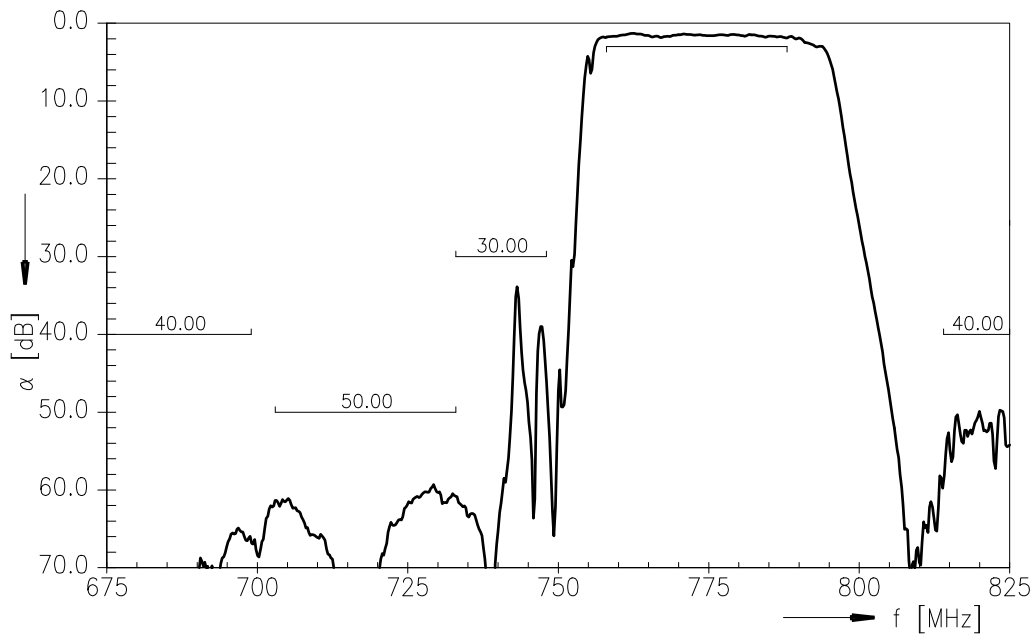


Frequency response Tx-Antenna (wideband)

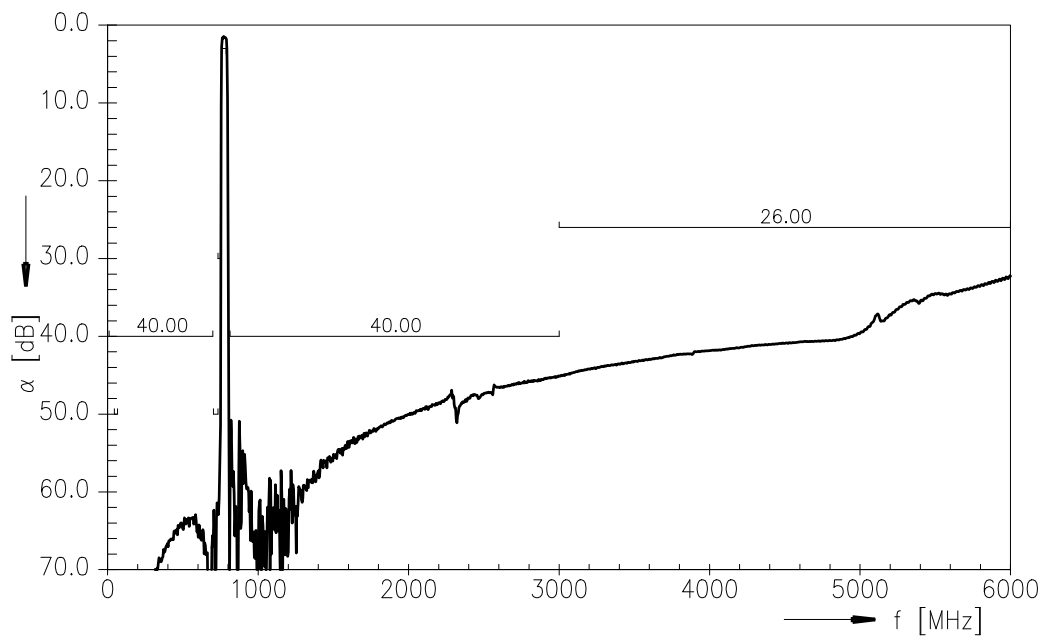


Please read *cautions and warnings* and *important notes* at the end of this document.

Frequency response Antenna-Rx

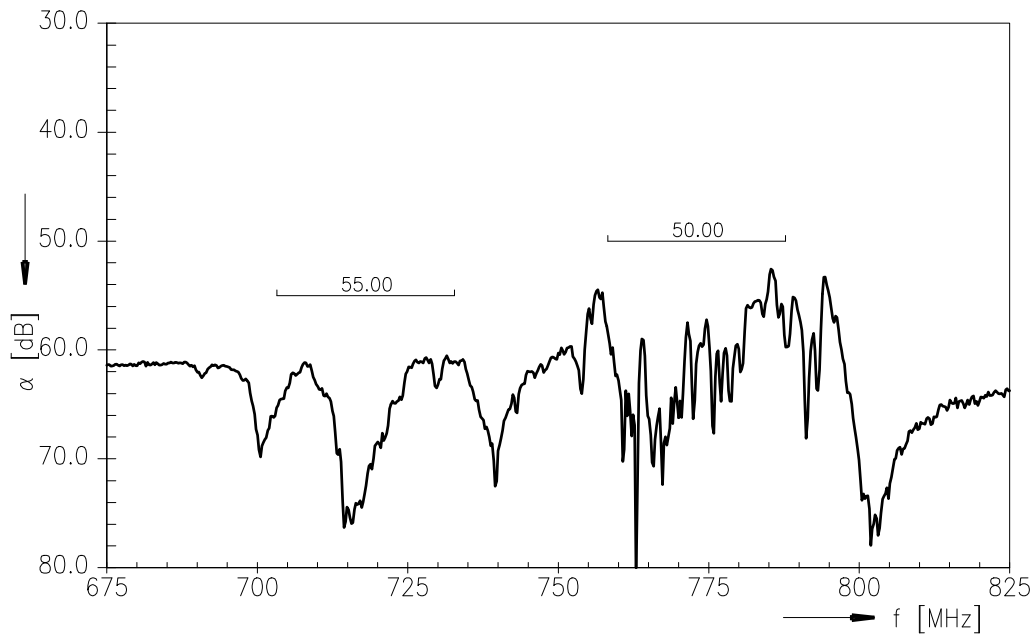


Frequency response Antenna-Rx (wideband)

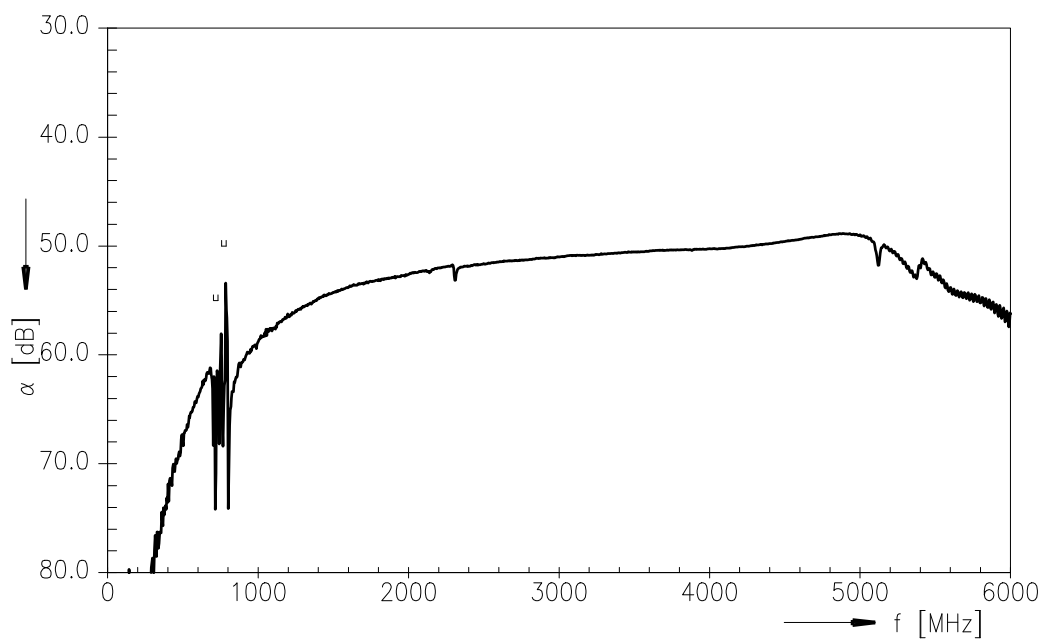


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Frequency response Tx-Rx



Frequency response Tx-Rx (wideband)

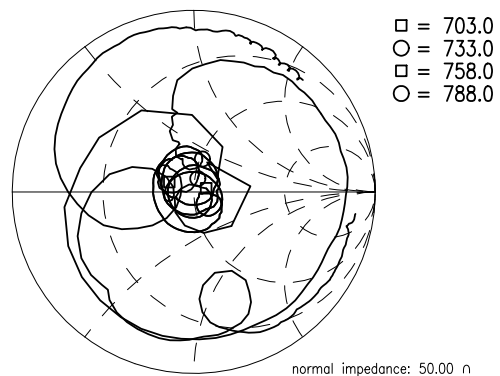
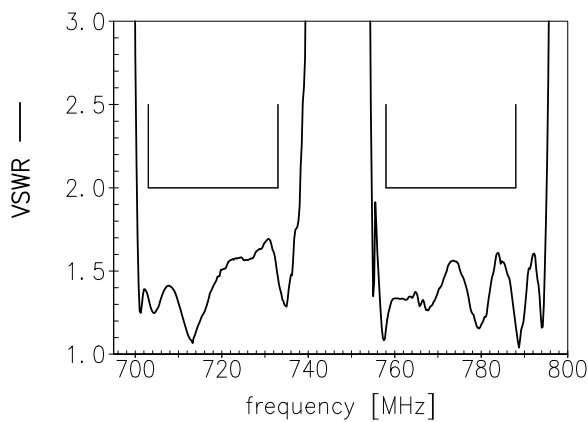
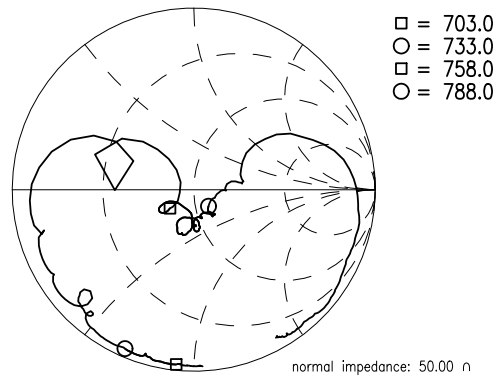
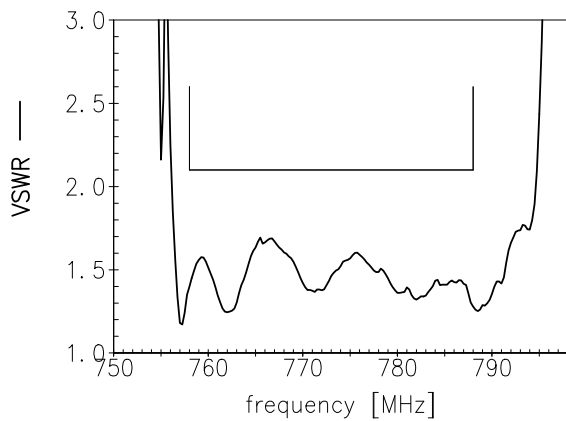
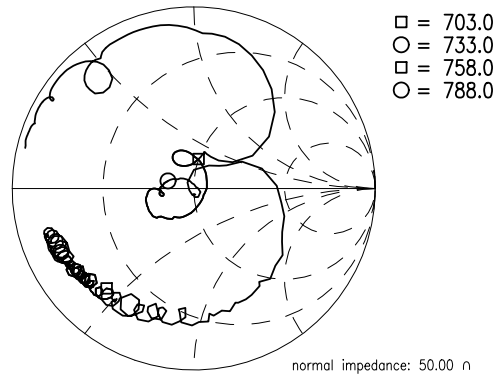
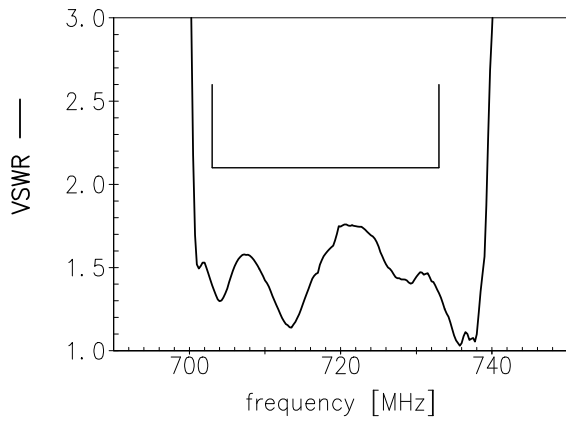


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Data Sheet

SMD

Return loss S_{11} Tx-port S_{22} Antenna-port S_{33} Rx-portReferences



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SAW Components	B8528
SAW duplexer	718.0 / 773.0 MHz

Data Sheet



References

Type	B8528
Ordering code	B39771B8528P810
Marking and package	C61157-A8-A79
Packaging	F61074-V8259-Z000
Date codes	L_1126
S-parameters	B8528_NB_UN.s3p, B8528_WB_UN.s3p See file header for pin/port assignment.
Soldering profile	S_6001
RoHS compatible	RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8 th , 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases.
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10 February 07, 2014

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