



These transformers are typical for 75 ohm bandwidth applications requiring a very fast rise times

Talema manufactures a wide range of transmit and receive transformers for T3/DS3 applications using bit rates of 44.736 Mbps. These transformers can also be used with E3 interfaces at 34.368 Mbps and STS-1 applications at 51.84 Mbps. A listing of IC's with recommended Talema transformers is listed on the following cross reference chart.

Quality and consistency is guaranteed through 100% testing of the specified parameters for Primary Inductance, Leakage Inductance, Turns Ratio, DC resistance and Interwinding Capacitance. This ensures that the Return Loss and Pulse Waveshape requirements of CCITT G.703 and ATT T.A.34 can be met. Additionally all parts are 100% tested for 1500V minimum isolation.

Temperature Performance

Products are offered with extended temperature (-40° to 85°C) as standard. Required minimum inductance levels are maintained at the lower temperature limits.



ENVIRONMENT

All TALEMA International Group manufacturing facilities are RoHS compliant and chokes, inductors and HF components are produced in an EMS facility certified to ISO-14001:2004.



IC - T3 / DS3 / E3 / STS-1 Interface Transformer Cross Reference Guide

IC Manufacturer	IC Part Number	Talema Transformer Part Number					
		Single SMD Transformer				Dual SMD	Tri-Port SMD
		Standard Temperature		Extended Temperature		Extended Temperature	
		Transmit	Receive	Transmit	Receive	TX & RX	TX & RX
Conexant (Rockwell)	CN8331, CN8332, CN8333	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	--	--
Infineon (Siemens)	PEB3452, PEB3460	--	--	DJE-40-6E	DJE-100-6A	--	--
Lucent	T7296	DJE-40-6A	--	DJE-100-6A	--	--	--
Exar	XRT75xxx	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	DJM-100B	DTM-100
	XRT73L00 / 2 / 3 / 4 / 6 / 12	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	DJM-100B	DTM-100
	XRT73LC03A / 04A, R12	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	DJM-100B	DTM-100
	XRT7300, XRT7302	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	DJM-100B	DTM-100
Maxim (Dallas)	DS3181 / 2 / 3 / 4	DJE-19-6B	DJE-19-6B	DJE-40-6D	DJE-40-6D	--	--
	DS3150 / 1 / 2 / 3 / 4	DJE-19-6B	DJE-19-6B	DJE-40-6D	DJE-40-6D	--	--
Mindspeed (Conexant)	CN28331, CN28332, CN28333	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	DJM-100B	DTM-100
	M28335, M28356	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	DJM-100B	DTM-100
	M28352, M28353, M28354	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	DJM-100B	DTM-100
TDK	78P2241B	DJE-19-6B	DJE-40-6A	DJE-40-6D	DJE-100-6A	DJM-100C/D	--
	78P2242, 78P2243, 78P2244	DJE-19-6B	DJE-40-6A	DJE-40-6D	DJE-100-6A	DJM-100C/D	--
	78P7200, 78P7200L	DJE-19-6B	DJE-40-6A	DJE-40-6D	DJE-100-6A	DJM-100C/D	--
	78P7203L, 78P7204L	DJE-19-6B	DJE-40-6A	DJE-40-6D	DJE-100-6A	DJM-100C/D	--
	78P2361, 78P2362	DJE-19-6B	DJE-40-6A	DJE-40-6D	DJE-100-6A	DJM-100C/D	--
Transwitch	MRT TXC-02050, E1	DJE-19-6B	DJE-40-6A	DJE-40-6D	DJE-100-6A	DJM-100C/D	--
	ART TXC-02020	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	DJM-100B	--
	ARTE TXC-02021	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	DJM-100B	--
	DART TXC-2030, DS3	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	DJM-100B	--
	DART TXC-2030, E3	DJE-19-6B	DJE-40-6A	DJE-40-6D	DJE-100-6A	DJM-100C/D	--
	DS3LIM-SN TXC-20153G	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	DJM-100B	--
	E3LIM TXC-20163	DJE-19-6B	DJE-40-6A	DJE-40-6D	DJE-100-6A	DJM-100C/D	--

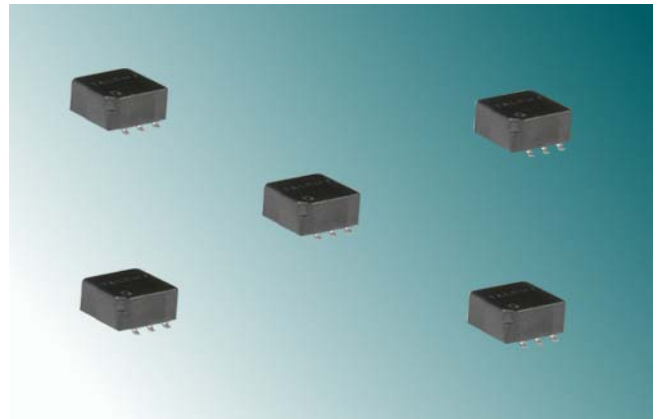


DJE Series • T3/DS3/E3/STS-1 Interface Transformers

These miniature transformers are typical for 75 ohm bandwidth applications requiring a very fast rise times

Features

- low cost SMD for pick and place compatability while providing consistent and reliable coplanarity
- low leakage inductance
- manufactured in an ISO-9001:2000, TS-16949:2002 and ISO-14001:2004 certified Talema facility
- fully RoHS compliant and meets lead free reflow level J-STD-020C



Electrical Specifications

Ratings @ 25°C ambient
 Minimum isolation voltage: 1500 Vrms
 Extended Operating Temperature Range: -40° to +85°C

Test Conditions

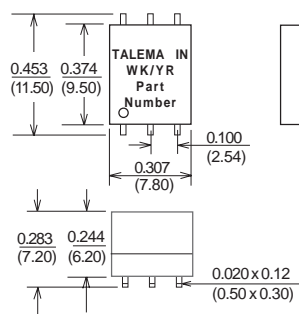
Inductance measured @ 1MHz, 10mV
 Interwinding Capacitance @ 100kHz/10mV
 Leakage Inductance @ 100kHz/10mV

DJE Series • SMD Wideband Interface Transformers

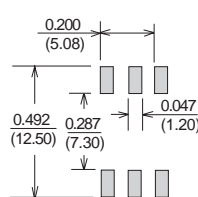
Extended Operating Temperature Range -40°C to +85°C

Part Number	OCL Primary (µH Min)	OCL Primary @ -40°C (µH Min)	Turns Ratio Pri/Sec ±2%	L _L Pri/Sec (µH Max)	C _C Pri/Sec (pF Max)	Bandwidth 75 Ohms		Isolation Voltage (Vrms Min)	Primary Pins	Schematic
						Freq. (MHz)				
						Low	High			
DJE-19-6B	19	--	1:2CT	0.06	10	0.250	500	1500	1-3	B
DJE-40-6A	40	--	1:1	0.10	10	0.200	340	1500	1-3	A
DJE-40-6B	40	20	1:2CT	0.11	12	.250	500	1500	1-3	B
DJE-40-6D	40	20	1:2CT	0.11	12	.250	500	1500	4-6	D
DJE-40-6E	40	20	1CT:1CT	0.10	10	.250	340	1500	1-3	E
DJE-45-6D	40	20	1:1.155CT	0.15	12	.200	340	1500	4-6	D
DJE-100-6A	100	40	1:1	0.11	10	.200	340	1500	1-3	A

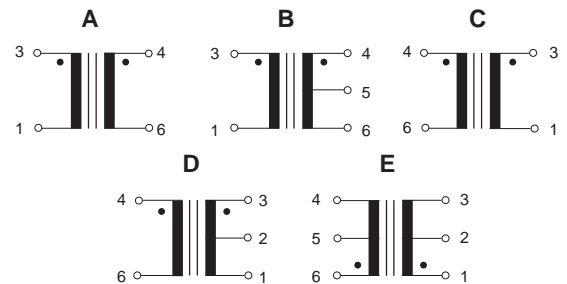
DJE-XXX-6X



Suggested Pad Layout



Schematics



Dimensions: Inches (Millimeters)
 Tolerance: ±0.010 (0.25) unless specified otherwise

Surface coplanarity will be 0.004 (0.01) maximum

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DJM Series • T3/DS3/E3/STS-1 Dual Interface Transformers

These miniature modules contain both transmit and receive transformers designed for use in T3/DS3 applications using bit rates of 44.736Mbps, E3 interfaces at 34.368Mbps and STS-1 applications at 51.84 Mbps. The transformers are typical for 75 ohm bandwidth applications requiring a very fast rise times.

Features

- low cost SMD for pick and place compatibility while providing consistent and reliable coplanarity
- low leakage inductance
- manufactured in an ISO-9001:2000, TS-16949:2002 and ISO-14001:2004 certified TALEMA facility
- fully RoHS compliant and meets lead free reflow level J-STD-020C



Electrical Specifications

Ratings @ 25°C ambient

Minimum isolation voltage: 1500 Vrms

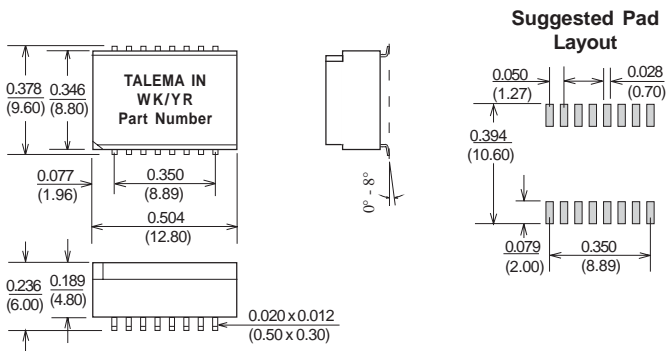
Extended Operating Temperature Range: -40° to +85°C

DJM Series • Dual SMD Wideband Interface Transformers

Extended Operating Temperature Range -40°C to +85°C

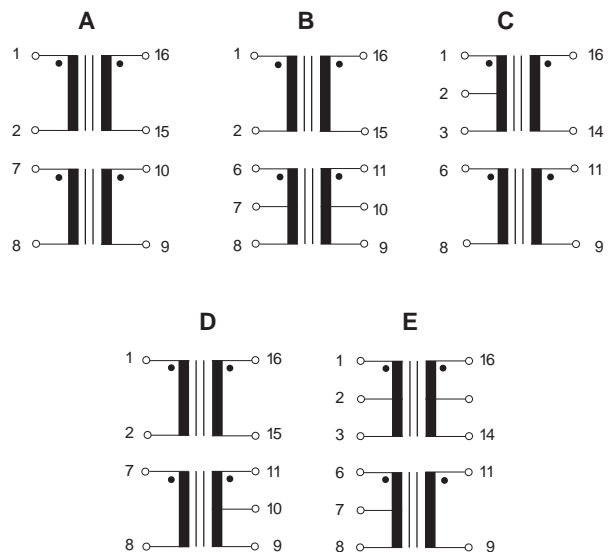
Part Number	Turns Ratio Pri/Sec ±2%		OCL Primary (µH Min)		L _L (µH Max)		C _{WW} (pF Max)		Isolation Voltage (Vrms Min)	Primary Pins		Schematic
	TX	RX	TX	RX	TX	RX	TX	RX		TX	RX	
DJM-100A	1:1	1:1	40	40	0.10	0.10	10	10	1500	1-2	7-8	A
DJM-100B	1ct:1ct	1:1	100	100	0.11	0.11	10	10	1500	6-8	16-15	B
DJM-100C	1:2ct	1:1	40	100	0.11	0.11	12	10	1500	16-14	6-8	C
DJM-100D	1:2ct	1:1	100	100	0.12	0.11	12	10	1500	7-8	16-15	D
DJM-100E	1:2ct	1:2ct	40	40	0.11	0.11	12	12	1500	16-14	11-9	E

DJM Dimensions



Surface coplanarity will be 0.004 (0.01) maximum

Schematics



Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise

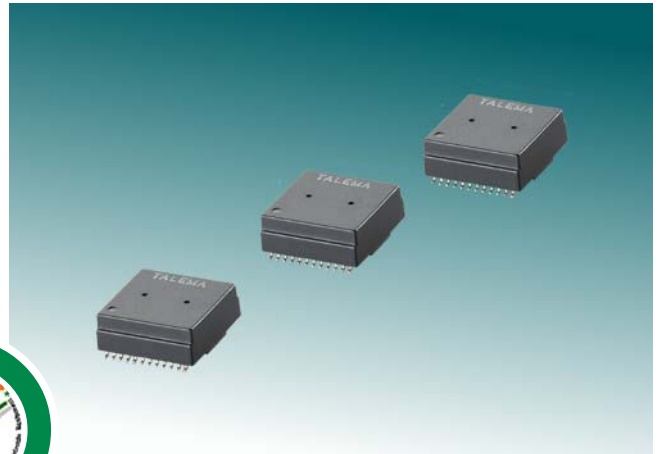


DTM Series • T3/DS3/E3/STS-1 Tri-Port Transformer Modules

These modules contain both transmit and receive transformers designed for use in T3/DS3 applications using bit rates of 44.736Mbps, E3 interfaces at 34.368Mbps and STS-1 applications at 51.84 Mbps. The transformers are typical for 75 ohm bandwidth applications requiring a very fast rise times.

Features

- low cost SMD for pick and place compatibility while providing consistent and reliable coplanarity
- low leakage inductance
- manufactured in an ISO-9001:2000, TS-16949:2002 and ISO-14001:2004 certified Talema facility
- fully RoHS compliant and meets lead free reflow level J-STD-020C



Electrical Specifications

Ratings @ 25°C ambient

Minimum isolation voltage: 1500 Vrms

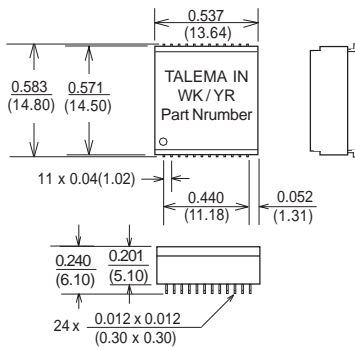
Extended Operating Temperature Range: -40° to +85°C

DTM Series • Tri-Port SMD Wideband Interface Transformer Modules

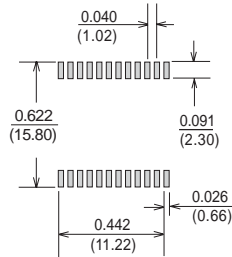
Extended Operating Temperature Range -40°C to +85°C

Part Number	Turns Ratio Pri/Sec ±2%	OCL Primary @ 25°C (µH Min)	OCL Primary @ -40°C (µH Min)	L _L (µH Max)	C _{WW} (pF Max)	Isolation Voltage (Vrms Min)	Primary Pins
DTM-100	1:1	100	40	0.11	12	1500	1-2, 3-4, 5-6, 7-8, 9-10, 11-12

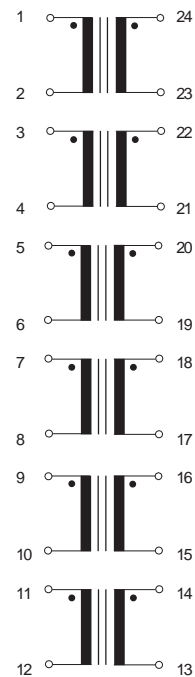
DTM Dimensions



Suggested Pad Layout



Schematic



Surface coplanarity will be 0.004 (0.01) maximum