



## IC • T3 / DS3 / E3 / STS-1 Transformer Selection Guide

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 all chokes, inductors and HF components are produced in an EMS facility which is 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
<b>Conexant</b> (Rockwell)	CN8331, CN8332, CN8333	DJE-40-6A	DJE-40-6A	DJE-100-6A	DJE-100-6A	--	--
<b>Infineon</b> (Siemens)	PEB3452, PEB3460	--	--	DJE-40-6E	DJE-100-6A	--	--
<b>Lucent</b>	T7296	DJE-40-6A	--	DJE-100-6A	--	--	--
<b>Exar</b>	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
<b>Maxim</b> (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	--	--
<b>Mindspeed</b> (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
<b>TDK</b>	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	--
<b>Transwitch</b>	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	--	

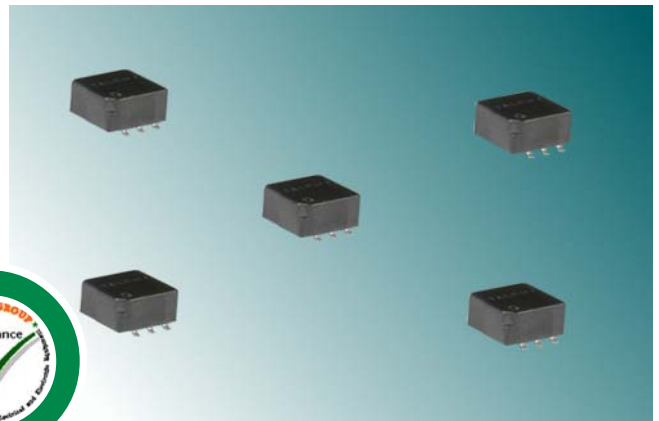


## DJE Series • T3/DS3/E3/STS-1 Interface Transformers

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 and Leakage Inductance @ 100kHz, 10mV

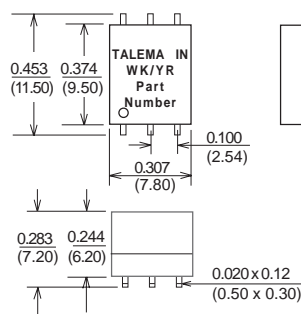
### Electrical Specifications @ 25°C

## DJE Series • SMD Wideband Interface Transformers

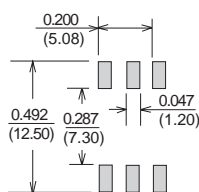
Extended Operating Temperature Range -40°C to +85°C

Part Number	OCL Primary (µH Min)	OCL Primary @ -40°C (µH Min)	Turns Ratio Pri/Sec ±2%	LL Pri/Sec (µH Max)	CC 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

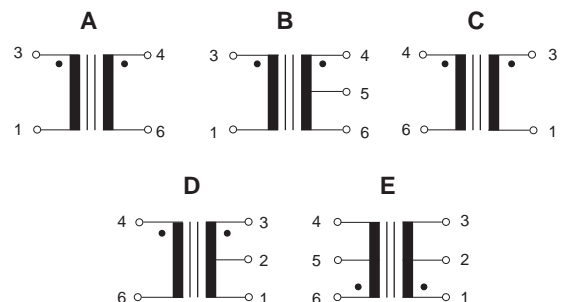


### Suggested Pad Layout



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

### Schematic



Surface coplanarity will be 0.004 (0.01) maximum

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