

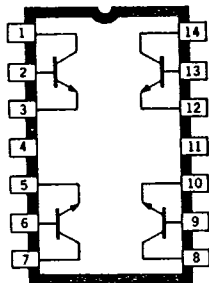
SERIES TPQ

T-43-25

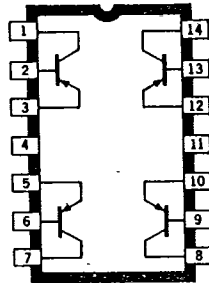
QUAD TRANSISTOR ARRAYS

Series TPQ quad transistor arrays are general-purpose silicon transistor arrays consisting of four independent devices.

All of these devices are furnished in a 14-pin dual in-line plastic package. The molded package is identical to that used with most consumer integrated circuits and offers superior mechanical protection during insertion into printed wiring boards.



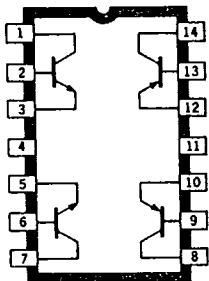
Dwg. No. A-10,050A



Dwg. No. A-10,051A

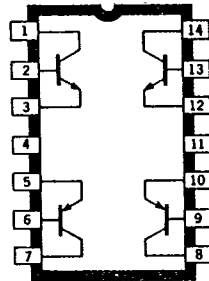
TPQ2222 TPQ222A
 TPQ2369 TPQ6427
 TPQ3904 TPQA06
 TPQA05

TPQ2907 TPQ2907A
 TPQ5401 TPQ3906
 TPQA56 TPQA55



Dwg. No. A-10,052A

TPQ6002



Dwg. No. A-10,053A

TPQ6502
 TPQ6700

ABSOLUTE MAXIMUM RATINGS

Power Dissipation, P_D
 (Each Transistor) 500 mW
 (Total Package) 2.0 W*
 Operating Temperature Range,
 T_A -55°C to +150°C
 Storage Temperature Range,
 T_S -65°C to +150°C

* Derate at the rate of 16 mW/°C above
 $T_A = +25^\circ\text{C}$

**SERIES TPQ
QUAD TRANSISTOR ARRAYS**

T-43-25

ELECTRICAL CHARACTERISTICS at $T_A = +25^\circ\text{C}$

Part Number	$V_{(BR)CBO}$ (V)	$V_{(BR)CEO}$ (V)	$V_{(BR)EBO}$ (V)	I_{CBO}		DC Current Gain			Saturation Voltage			f_T		Max. (pF)	Similar Discrete Devices	
				Max @ V_{CB} (nA)	Max @ V_{CB} (V)	h_{FE} Min.	Conditions		V_{CE} Max. (V)	V_{BE} Max. (V)	@ I_C (mA)	Min. (MHz)	@ I_C (mA)			
							I_C (mA)	V_{CE} (V)								
Four NPN Devices																
TPQ2222	60	40	5.0	50	50	75	10	10	0.40	1.30	150	200	20	8.0	2N2222	
						100	150	10	1.60	2.60	300					
						30	300	10								
TPQ2222A	75	40	6.0	50	50	75	10	10	0.40	1.30	150	200	20	8.0	2N2222A	
						100	150	10	1.60	2.60	300					
						30	300	10								
TPQ2369	40	15	4.5	400	20	40	10	1.0	0.25	0.90	10	450	10	4.0	2N2369	
						20	100	2.0								
TPQ3904	60	40	6.0	50	40	30	0.1	1.0	0.20	0.85	10	250	10	4.0	2N3904	
						50	1.0	1.0								
						75	10	1.0								
TPQ6427	50	40	12	100	30	5k	10	5.0	1.5	2.0	100	125	10	8.0	2N6427	
						10k	100	5.0								
TPQA05	60	60	4.0	100 (Note 2)		50	10	1.0	0.25	—	100	—	—	10	MPSA05	
TPQA06	80	80	4.0	100 (Note 3)		50	10	1.0	0.25	—	100	—	—	10	MPSA06	
						50	100	2.0								

NOTE: 1. Base-emitter voltage shown is $V_{BE(ON)}$ at indicated I_C , $V_{CE} = 5.0\text{ V}$.

2. I_{CES} at $V_{CE} = 50\text{ V}$, $V_{BE} = 0$

3. I_{CES} at $V_{CE} = 60\text{ V}$, $V_{BE} = 0$

SERIES TPQ
QUAD TRANSISTOR ARRAYS

T-43-2.5

ELECTRICAL CHARACTERISTICS at $T_A = +25^\circ\text{C}$

Part Number	$V_{(BR)CBO}$ (V)	$V_{(BR)CEO}$ (V)	$V_{(BR)EBO}$ (V)	I_{CBO}		DC Current Gain			Saturation Voltage			f_T		Max. (pF)	Similar Discrete Devices
				Max @ V_{CB} (nA)	V_{CB} (V)	h_{FE} Min.	Conditions		V_{CE} Max. (V)	V_{BE} Max. (V)	@ I_C (mA)	Min. (MHz)	@ I_C (mA)		
							I_C (mA)	V_{CE} (V)							

Four PNP Devices

TPQ2907	-60	-40	-5.0	50	-30	75	10	-10	-0.40	-1.30	150	200	50	8.0	2N2907
						100	150	-10	-1.60	-2.60	300				
						50	300	-10							
TPQ2907A	-60	-60	-5.0	50	-30	75	10	-10	-0.40	-1.30	150	200	50	8.0	2N2907A
						100	150	-10	-1.60	-2.60	300				
						50	300	-10							
TPQ3906	-40	-40	-5.0	50	-30	40	0.1	-1.0	-0.25	-0.85	10	200	10	4.5	2N3906
						60	1.0	-1.0							
						75	10	-1.0							
TPQ5401	-160	-150	-5.0	100 (Note 4)		50	1.0	-5.0	-0.20	1.00	10	100	10	6.0	2N5401
						60	10	-5.0	-0.50	1.00	50				
						50	50	-5.0							
TPQA55	-60	-60	-4.0	100 (Note 5)		50	10	-1.0	-0.25	—	100	—	—	15	MPSA55
						50	100	-2.0							
TPQA56	-80	-80	-4.0	100 (Note 6)		50	10	-1.0	-0.25	—	100	—	—	15	MPSA56
						50	100	-2.0							

Two NPN/Two PNP Devices (Note 7)

TPQ6002	60	30	5.0	30	50	50	1.0	10	0.40	1.30	150	200	50	8.0	2N2222 and 2N2907
						75	10	10	1.40	2.00	300				
						100	150	10							
						30	300	10							
TPQ6502	60	30	5.0	30	50	50	1.0	10	0.40	1.30	150	200	50	8.0	2N2222 and 2N2907
						75	10	10	1.40	2.00	300				
						100	150	10							
						30	300	10							
TPQ6700	40	40	5.0	50	30	30	0.1	1.0	0.25	0.90	10	200	10	4.5	2N3904 and 2N3906
						50	1.0	1.0							
						70	10	1.0							

NOTE: 4. I_{CES} at $V_{CE} = 120\text{ V}$, $V_{BE} = 0$.

5. I_{CES} at $V_{CE} = 50\text{ V}$, $V_{BE} = 0$.

6. I_{CES} at $V_{CE} = 60\text{ V}$, $V_{BE} = 0$.

7. Complimentary pairs. Polarity shown is for NPN devices.