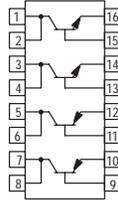


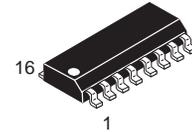
# Quad Complementary Pair Transistor

## PNP/NPN Silicon



# MMPQ6700

Voltage and current are negative for PNP transistors



CASE 751B-05, STYLE 4  
SO-16

### MAXIMUM RATINGS

Rating	Symbol	Value		Unit
Collector–Emitter Voltage	$V_{CEO}$	40		Vdc
Collector–Base Voltage	$V_{CB}$	40		Vdc
Emitter–Base Voltage	$V_{EB}$	5.0		Vdc
Collector Current — Continuous	$I_C$	200		mAdc
		Each Transistor	Four Transistors Equal Power	
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	0.4 3.2	0.72 6.4	Watts mW/°C
Total Power Dissipation @ $T_C = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	0.66 5.3	1.92 15.4	Watts mW/°C
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	–55 to +150		°C

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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### OFF CHARACTERISTICS

Collector–Emitter Breakdown Voltage <sup>(1)</sup> ( $I_C = 10\text{ mAdc}, I_B = 0$ )	$V_{(BR)CEO}$	40	—	Vdc
Collector–Base Breakdown Voltage ( $I_C = 10\ \mu\text{Adc}, I_E = 0$ )	$V_{(BR)CBO}$	40	—	Vdc
Emitter–Base Breakdown Voltage ( $I_E = 10\ \mu\text{Adc}, I_C = 0$ )	$V_{(BR)EBO}$	5.0	—	Vdc
Collector Cutoff Current ( $V_{CB} = 30\text{ Vdc}, I_E = 0$ )	$I_{CBO}$	—	50	nAdc
Emitter Cutoff Current ( $V_{EB} = 4.0\text{ Vdc}, I_C = 0$ )	$I_{EBO}$	—	50	nAdc

### ON CHARACTERISTICS<sup>(1)</sup>

DC Current Gain ( $I_C = 0.1\text{ mAdc}, V_{CE} = 1.0\text{ Vdc}$ ) ( $I_C = 1.0\text{ mAdc}, V_{CE} = 1.0\text{ Vdc}$ ) ( $I_C = 10\text{ mAdc}, V_{CE} = 1.0\text{ Vdc}$ )	$h_{FE}$	35 50 70	— — —	—
Collector–Emitter Saturation Voltage ( $I_C = 10\text{ mAdc}, I_B = 1.0\text{ mAdc}$ )	$V_{CE(sat)}$	—	0.25	Vdc
Base–Emitter Saturation Voltage ( $I_C = 10\text{ mAdc}, I_B = 1.0\text{ mAdc}$ )	$V_{BE(sat)}$	—	0.9	Vdc

### DYNAMIC CHARACTERISTICS

Current–Gain — Bandwidth Product <sup>(1)</sup> ( $I_C = 10\text{ mAdc}, V_{CE} = 20\text{ Vdc}, f = 100\text{ MHz}$ )	$f_T$	200	—	MHz
Output Capacitance ( $V_{CB} = 5.0\text{ Vdc}, I_E = 0, f = 1.0\text{ MHz}$ )	$C_{ob}$	—	4.5	pF
Input Capacitance ( $V_{EB} = 0.5\text{ Vdc}, I_C = 0, f = 1.0\text{ MHz}$ )	$C_{ib}$	— —	10 8.0	pF
		PNP NPN		

1. Pulse Test: Pulse Width  $\leq 300\ \mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ .