

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CE0}	40	Vdc
Collector-Base Voltage	V_{CBO}	60	Vdc
Emitter-Base Voltage	V_{EBO}	6.0	Vdc
Collector Current — Continuous	I_C	50	mA
		Each Transistor	Total Device
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	0.6 3.42	1.8 10.3 Watts mW/°C
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	1.2 6.85	4.2 24 Watts mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	°C

MHQ2483 MHQ2484

CASE 632-02, STYLE 1
TO-116

QUAD
AMPLIFIER TRANSISTOR

NPN SILICON

Refer to 2N2919 for graphs.

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

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C = 10\text{ mA}$, $I_B = 0$)	$V_{(BR)CEO}$	40	—	—	Vdc
Collector-Base Breakdown Voltage ($I_C = 10\text{ }\mu\text{A}$, $I_E = 0$)	$V_{(BR)CBO}$	60	—	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = 10\text{ }\mu\text{A}$, $I_C = 0$)	$V_{(BR)EBO}$	6.0	—	—	Vdc
Collector Cutoff Current ($V_{CB} = 45\text{ Vdc}$, $I_E = 0$)	I_{CBO}	—	—	20	nA
Emitter Cutoff Current ($V_{BE} = 3.0\text{ Vdc}$, $I_C = 0$)	I_{EBO}	—	—	20	nA

ON CHARACTERISTICS

DC Current Gain ($I_C = 0.1\text{ mA}$, $V_{CE} = 5.0\text{ Vdc}$)	MHQ2483 MHQ2484	h_{FE}	100 200	— —	— —	—
($I_C = 1.0\text{ mA}$, $V_{CE} = 5.0\text{ Vdc}$)	MHQ2483 MHQ2484		150 300	— —	— —	
($I_C = 10\text{ mA}$, $V_{CE} = 5.0\text{ Vdc}$)	MHQ2483 MHQ2484		150 300	— —	— —	
Collector-Emitter Saturation Voltage ($I_C = 1.0\text{ mA}$, $I_B = 0.1\text{ mA}$) ($I_C = 10\text{ mA}$, $I_B = 1.0\text{ mA}$)		$V_{CE(sat)}$	— —	0.13 0.15	0.35 0.5	Vdc
Base-Emitter On Voltage ($I_C = 100\text{ }\mu\text{A}$, $V_{CE} = 5.0\text{ Vdc}$) ($I_C = 10\text{ mA}$, $V_{CE} = 5.0\text{ Vdc}$)		$V_{BE(on)}$	— —	0.58 0.70	0.7 0.8	Vdc

SMALL-SIGNAL CHARACTERISTICS

Current-Gain — Bandwidth Product ($I_C = 500\text{ }\mu\text{A}$, $V_{CE} = 5.0\text{ Vdc}$, $f = 20\text{ MHz}$)		f_T	50	100	—	MHz
Input Capacitance ($V_{BE} = 0.5\text{ Vdc}$, $I_C = 0$, $f = 100\text{ kHz}$)		C_{ibo}	—	4.0	8.0	pF
Collector-Base Capacitance ($V_{CB} = 5.0\text{ Vdc}$, $I_E = 0$, $f = 100\text{ kHz}$)		C_{cb}	—	1.8	6.0	pF
Noise Figure ($I_C = 10\text{ }\mu\text{A}$, $V_{CE} = 5.0\text{ Vdc}$, $R_S = 10\text{ kohms}$, $f = 10\text{ Hz}$ to 15.7 kHz , $BW = 10\text{ kHz}$)	MHQ2483 MHQ2484	NF	— —	3.0 2.0	— —	dB