

MPS6573 (SILICON)
thru
MPS6576

NPN SILICON ANNULAR TRANSISTORS

- ... designed for audio amplifier applications.
- DC Current Gain Specified for Audio Predriver Design – 100 μ Adc to 10 mAdc for MPS6573 and MPS6575
- DC Current Gain to Facilitate Differential Amplifier Design for Audio Input Stages – Grouping at 1.0 mAdc for MPS6574 and MPS6576
- Current-Gain – Bandwidth Product – $f_T = 200$ MHz (Max) for Audio Frequency Design

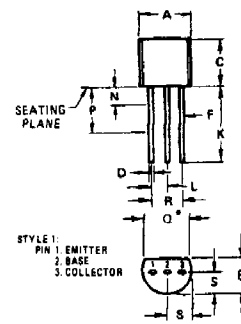
**NPN SILICON
AUDIO TRANSISTORS**



MAXIMUM RATINGS				
Rating	Symbol	MPS6573 MPS6574	MPS6575 MPS6576	Unit
Collector-Emitter Voltage	V_{CE0}	35	45	Vdc
Collector-Base Voltage	V_{CB}	35	45	Vdc
Emitter-Base Voltage	V_{EB}	4.0		Vdc
Collector Current – Continuous	I_C	100		mAdc
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	350	2.8	mW mW/ $^\circ\text{C}$
Total Power Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	1.0	8.0	Watt mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150		$^\circ\text{C}$

THERMAL CHARACTERISTICS			
Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA(1)}$	357	$^\circ\text{C}/\text{W}$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	125	$^\circ\text{C}/\text{W}$

(1) $R_{\theta JA}$ is measured with the device soldered into a typical printed circuit board.



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.450	5.200	0.175	0.205
B	3.180	4.180	0.125	0.165
C	4.320	5.330	0.170	0.210
D	0.407	0.533	0.016	0.021
F	0.407	0.462	0.016	0.018
K	12.700	—	0.500	—
L	1.150	1.390	0.045	0.055
N	—	1.270	—	0.050
P	6.350	—	0.250	—
O	3.430	—	0.135	—
R	2.410	2.670	0.095	0.105
S	2.030	2.670	0.080	0.105

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MPS6573 thru MPS6576 (continued)

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

Characteristic	Symbol	Min	Max	Unit	
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage (3) ($I_C = 1.0 \text{ mA dc}$, $I_B = 0$)	MPS6573, MPS6574 MPS6575, MPS6576	BV _{CEO}	35 45	— —	V _{dc}
Collector Cutoff Current ($V_{CB} = 35 \text{ V dc}$, $I_E = 0$) ($V_{CB} = 45 \text{ V dc}$, $I_E = 0$)	MPS6573, MPS6574 MPS6575, MPS6576	I _{CBO}	— —	100 100	nA _{dc}
Emitter Cutoff Current ($V_{EB} = 4.0 \text{ V dc}$, $I_C = 0$)		I _{EBO}	—	100	nA _{dc}
ON CHARACTERISTICS					
DC Current Gain ($I_C = 100 \mu\text{A dc}$, $V_{CE} = 5.0 \text{ V dc}$) ($I_C = 10 \text{ mA dc}$, $V_{CE} = 5.0 \text{ V dc}$) (3) ($I_C = 1.0 \text{ mA dc}$, $V_{CE} = 5.0 \text{ V dc}$)	MPS6573, MPS6575 MPS6573, MPS6575 MPS6574, MPS6576 (2) Yellow Blue Green Silver	h _{FE}	100 200 100 125 150 200	— 500 150 185 225 300	—
Collector-Emitter Saturation Voltage ($I_C = 10 \text{ mA dc}$, $I_B = 1.0 \text{ mA dc}$)		V _{CE(sat)}	—	0.5	V _{dc}
Base-Emitter On Voltage (3) ($I_C = 10 \text{ mA dc}$, $V_{CE} = 5.0 \text{ V dc}$)		V _{BE(on)}	—	0.8	V _{dc}
DYNAMIC CHARACTERISTICS					
Current-Gain – Bandwidth Product (3) ($I_C = 10 \text{ mA dc}$, $V_{CE} = 5.0 \text{ V dc}$, $f = 100 \text{ kHz}$)		f _T	100	350	MHz
Output Capacitance ($V_{CB} = 12 \text{ V dc}$, $I_E = 0$, $f = 100 \text{ kHz}$)		C _{ob}	—	12	pF

(2) The MPS6574 and MPS6576 will be color coded to identify DC Current Gain Categories.

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