

MPS6512 thru' MPS6515 are NPN silicon planar epitaxial transistors designed for general purpose amplifier applications and for complementary circuitry.

CASE TO-92A



ABSOLUTE MAXIMUM RATINGS

		MPS6512/3	MPS6514/5
Collector-Emitter Voltage	V <sub>CEO</sub>	30V	25V
Collector-Base Voltage	V <sub>CB0</sub>	40V	40V
Emitter-Base Voltage	V <sub>EB0</sub>	4V	4V
Collector Current	I <sub>C</sub>	100mA	100mA
Total Power Dissipation @ T <sub>A</sub> =25°C	P <sub>tot</sub>	350mW	350mW
		1W	1W
Operating Junction & Storage Temperature	T <sub>j</sub> , T <sub>stg</sub>	-55 to +150°C	

ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	30			V	I <sub>C</sub> =0.5mA I <sub>B</sub> =0
		25			V	
Emitter-Base Breakdown Voltage	BV <sub>EB0</sub>	4			V	I <sub>E</sub> =10μA I <sub>C</sub> =0
Collector Cutoff Current	I <sub>CB0</sub>			50	nA	V <sub>CB</sub> =30V I <sub>E</sub> =0
				1	μA	T <sub>A</sub> =60°C V <sub>CB</sub> =30V I <sub>E</sub> =0
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>			0.5	V	I <sub>C</sub> =50mA I <sub>B</sub> =5mA
D.C. Current Gain	HFE	50		100		I <sub>C</sub> =2mA V <sub>CE</sub> =10V
		90		180		
		150		300		
		250		500		
D.C. Current Gain	HFE *	30				I <sub>C</sub> =100mA V <sub>CE</sub> =10V
		60				
		90				
		150				
Current Gain-Bandwidth Product	f <sub>T</sub>		150		MHz	I <sub>C</sub> =2mA V <sub>CE</sub> =10V
			250		MHz	I <sub>C</sub> =10mA V <sub>CE</sub> =10V
Output Capacitance	C <sub>ob</sub>			3.5	pF	V <sub>CB</sub> =10V f=100kHz

5.80



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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Noise Figure	NF		2		dB	$I_C=10\mu\text{A}$ $V_{CE}=5\text{V}$ $R_S=10\text{K}\Omega$ Power Bandwidth =15.7kHz, 3dB points @ 10Hz & 10kHz

\* Pulse Test : Pulse Width=0.3ms, Duty Cycle=1%

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