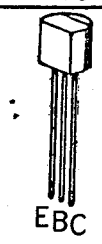
MICRO ELECTRONICS

MPS 6512 thru' MPS 6515

NPN
SILICON PLANAR
EPITAXIAL TRANSISTORS

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_{CEO}	30V	25V
Collector-Base Voltage	V_{CBO}	40V	40V
Emitter-Base Voltage	V_{EBO}	4V	4V
Collector Current	I_C	100mA	100mA
Total Power Dissipation @ T_A=25°C	P_{tot}	350mW	350mW
@ T_C=25°C		1W	1W
Operating Junction & Storage Temperature	Tj,Tstg	-55 to +150°C	

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER		SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS	
Collector-Emitter Breakdown Voltage	MPS6512/3	BV_{CEO}	30			V	I_C=0.5mA	I_B=0
	MPS6514/5		25			V		
Emitter-Base Breakdown Voltage		BV_{EBO}	4			V	I_E=10μA	I_C=0
Collector Cutoff Current		I_{CBO}			50	nA	V_{CB}=30V	I_E=0
					1	μA	T_A=60°C	
							V_{CB}=30V	I_E=0
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$			0.5	V	I_C=50mA	I_B=5mA
D.C. Current Gain	MPS6512	H_{FE}	50		100		I_C=2mA	V_{CE}=10V
	MPS6513		90		180			
	MPS6514		150		300			
	MPS6515		250		500			
D.C. Current Gain	MPS6512	H_{FE} *	30				I_C=100mA	V_{CE}=10V
	MPS6513		60					
	MPS6514		90					
	MPS6515		150					
Current Gain-Bandwidth Product		f_T		150		MHz	I_C=2mA	V_{CE}=10V
				250		MHz	I_C=10mA	V_{CE}=10V
Output Capacitance		Cob			3.5	pF	V_{CB}=10V	f=100kHz

5.80

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ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Noise Figure	NF		2		dB	I_C=10μA V_{CE}=5V R_S=10KΩ Power Bandwidth =15.7kHz, 3dB points @ 10Hz & 10kHz

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