



# MPS - A20

# MPS - A70

## COMPLEMENTARY SILICON AF SMALL SIGNAL TRANSISTORS

### MICRO ELECTRONICS

THE MPS-A20 (NPN) AND MPS-A70 (PNP) ARE SILICON PLANAR EPITAXIAL TRANSISTORS FOR USE IN AF SMALL SIGNAL APPLICATIONS. THEY ARE SUPPLIED IN SELECTED HFE GROUPS.

CASE TO-92A



EBC

MPS-A20 (NPN)  
MPS-A70 (PNP)

ABSOLUTE MAXIMUM RATINGS For p-n-p devices, voltage and current values are negative.

Collector-Base Voltage	VCBO	45V
Collector-Emitter Voltage	VCEO	40V
Emitter-Base Voltage	VEBO	4V
Collector Current	IC	100mA
Total Power Dissipation ( $T_A \leq 25^\circ C$ )	Ptot	350mW derate 2.8mW/°C above 25°C
Operating Junction & Storage Temperature	Tj, Tstg	-55 to 150°C

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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BVCBO	45			V	IC=0.1mA IE=0
Collector-Emitter Breakdown Voltage	LVCEO *	40			V	IC=1mA IB=0
Emitter-Base Breakdown Voltage	BVEBO	4			V	IE=0.1mA IC=0
Collector Cutoff Current	ICBO			100	nA	VCB=30V IE=0
Collector-Emitter Saturation Voltage	VCE(sat) *		0.08	0.25	V	IC=10mA IB=1mA
			0.25		V	IC=100mA IB=10mA
Base-Emitter Voltage	VBE *		0.67		V	IC=5mA VCE=10V
D.C. Current Gain	HFE *	40		400		IC=5mA VCE=10V
		40	70	100		
		80	140	200		
		120	200	300		
		150	270	400		
Current Gain-Bandwidth Product	fT	125	200		MHz	IC=5mA VCE=10V
Collector-Base Capacitance	Cob		2.7	4	pF	VCB=10V IE=0 f=1MHz
Noise Figure	NF		2		dB	IC=0.1mA VCE=10V RG=10KΩ f=30Hz-15KHz

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

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MPS-A20 . MPS-A70  
TYPICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

