



MPS-A55 · MPS-A56

COMPLEMENTARY SILICON AF MEDIUM POWER TRANSISTORS

MICRO ELECTRONICS

THE MPS-A05, MPS-A06, MPS-A55, MPS-A56 ARE SILICON PLANAR EPITAXIAL TRANSISTORS FOR AF DRIVERS AND OUTPUTS, AS WELL AS FOR UNIVERSAL APPLICATIONS. THE MPS-A05, MPS-A06 ARE NPN AND ARE COMPLEMENTARY TO THE PNP MPS-A55 AND MPS-A56 RESPECTIVELY.

CASE TO-92A



ABSOLUTE MAXIMUM RATINGS

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

		MPS-A05(NPN) MPS-A55(PNP)	MPS-A06(NPN) MPS-A56(PNP)
Collector-Base Voltage	V_{CBO}	60V	80V
Collector-Emitter Voltage	V_{CEO}	60V	80V
Emitter-Base Voltage	V_{EBO}	4V	
Collector Current	I_C	0.5A	
Collector Peak Current ($t \leq 10\text{ms}$)	I_{CM}	1.5A	
Total Power Dissipation ($T_C \leq 25^\circ\text{C}$)	P_{tot}	1.5W	
		625mW	
Operating Junction & Storage Temperature	T_j, T_{stg}	-55 to 150°C	

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

PARAMETER	SYMBOL	MPS-A05(NPN) MPS-A55(PNP)		MPS-A06(NPN) MPS-A56(PNP)		UNIT	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
Collector-Emitter Breakdown Voltage	$LV_{CEO} *$	60		80		V	$I_C = 1\text{mA}$ $I_B = 0$
Emitter-Base Breakdown Voltage	BV_{EBO}	4		4		V	$I_E = 0.1\text{mA}$ $I_C = 0$
Collector Cutoff Current	IC_{BO}		100		100	nA	$V_{CB} = V_{CBO}$ $I_E = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)} *$		0.25		0.25	V	$I_C = 100\text{mA}$ $I_B = 10\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE} *$		1.2		1.2	V	$I_C = 100\text{mA}$ $V_{CE} = 1\text{V}$
D.C. Current Gain	$H_{FE} *$	50		50			$I_C = 10\text{mA}$ $V_{CE} = 1\text{V}$
		50		50			$I_C = 100\text{mA}$ $V_{CE} = 1\text{V}$
Current Gain-Bandwidth Product	f_T	50		50		MHz	$I_C = 100\text{mA}$ $V_{CE} = 1\text{V}$
		100		100		MHz	$I_C = 100\text{mA}$ $V_{CE} = 2\text{V}$
Collector-Base Capacitance	C_{ob}		20		20	pF	$V_{CB} = 10\text{V}$ $I_E = 0$ $f = 1\text{MHz}$

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

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

