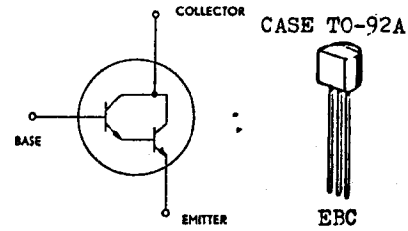


THE MPS-A13, MPS-A14 (NPN) AND MPS-A65, MPS-A66 (PNP) ARE SILICON PLANAR EPITAXIAL DARLINGTON TRANSISTORS FOR AF AMPLIFIERS REQUIRING HIGH INPUT IMPEDANCE.



ABSOLUTE MAXIMUM RATINGS

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

		MPS-A13 (NPN) MPS-A14 (NPN)	MPS-A65 (PNP) MPS-A66 (PNP)
Collector-Emitter Voltage ($V_{BE}=0$)	V_{CES}	30V	30V
Emitter-Base Voltage	V_{EBO}	10V	8V
Collector Current	I_C		0.3A
Total Power Dissipation ($T_C \leq 25^\circ C$)	P_{tot}		1.2W
($T_A \leq 25^\circ C$)			0.5W
Operating Junction & Storage Temperature	T_j, T_{stg}		-55 to 150°C

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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Emitter Breakdown Voltage	BV_{CES}	30			V	$I_C=0.1mA, I_B=0$
Collector Cutoff Current	I_{CBO}			100	nA	$V_{CB}=30V, I_E=0$
Emitter Cutoff Current	I_{EBO}			100	nA	$V_{EB}=V_{EBO}, I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}^*$		0.75	1.5	V	$I_C=100mA, I_B=0.1mA$
Base-Emitter Voltage	V_{BE}^*		1.35	2.0	V	$I_C=100mA, V_{CE}=5V$
D.C. Current Gain	H_{FE}^*					$I_C=10mA, V_{CE}=5V$
	MPS-A13	5			$\times 10^3$	
	MPS-A14	10			$\times 10^3$	
	MPS-A65	50			$\times 10^3$	
	MPS-A66	75			$\times 10^3$	
D.C. Current Gain	H_{FE}^*					$I_C=100mA, V_{CE}=5V$
	MPS-A13	10			$\times 10^3$	
	MPS-A14	20			$\times 10^3$	
	MPS-A65	20			$\times 10^3$	
	MPS-A66	40			$\times 10^3$	
Current Gain-Bandwidth Product	f_T					$I_C=10mA, V_{CE}=5V$
	MPS-A13, 14	125			MHz	
	MPS-A65, 66	100			MHz	
Collector-Base Capacitance	C_{ob}					$V_{CB}=10V, I_E=0$
	MPS-A13, 14		3		pF	$f=100kHz$
	MPS-A65, 66		4		pF	
Noise Figure ($f=1kHz, R_G=100\Omega$)	NF		2		dB	$I_C=1mA, V_{CE}=5V$

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



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

