

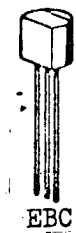


NPN SILICON GENERAL PURPOSE HIGH VOLTAGE TRANSISTORS

**MICRO ELECTRONICS**

CASE TO-92A

THE MPS-A42, MPS-A43 ARE NPN SILICON PLANAR TRANSISTORS FOR GENERAL PURPOSE HIGH VOLTAGE APPLICATIONS SUCH AS TV VIDEO OUTPUT STAGE AND GAS DISCHARGE TUBE DRIVER.



ABSOLUTE MAXIMUM RATINGS

		<u>MPS-A42</u>	<u>MPS-A43</u>
Collector-Base Voltage	V <sub>CB0</sub>	300V	200V
Collector-Emitter Voltage	V <sub>CEO</sub>	300V	200V
Emitter-Base Voltage	V <sub>EB0</sub>	6V	6V
Collector Current	I <sub>C</sub>	100mA	
Collector Peak Current (t ≤ 10ms)	I <sub>CM</sub>	500mA	
Total Power Dissipation (T <sub>C</sub> ≤ 25°C)	P <sub>tot</sub>	1.5W	
(T <sub>A</sub> ≤ 25°C)		625mW	
Operating Junction & Storage Temperature	T <sub>j</sub> , T <sub>stg</sub>	-55 to 150°C	

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

PARAMETER	SYMBOL	MPS-A42		MPS-A43		UNIT	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
Collector-Base Breakdown Voltage	BV <sub>CB0</sub>	300		200		V	I <sub>C</sub> =0.1mA I <sub>E</sub> =0
Collector-Emitter Breakdown	LV <sub>CEO</sub>	300		200		V	I <sub>C</sub> =1mA I <sub>B</sub> =0
Emitter-Base Breakdown Voltage	BV <sub>EB0</sub>	6		6		V	I <sub>E</sub> =0.1mA I <sub>C</sub> =0
Collector Cutoff Current	I <sub>CBO</sub>	0.1		0.1		μA	V <sub>CB</sub> =200V I <sub>E</sub> =0
							V <sub>CB</sub> =160V I <sub>E</sub> =0
Emitter Cutoff Current	I <sub>EBO</sub>	0.1		0.1		μA	V <sub>EB</sub> =6V I <sub>C</sub> =0
							V <sub>EB</sub> =4V I <sub>C</sub> =0
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	0.5		0.4		V	I <sub>C</sub> =20mA I <sub>B</sub> =2mA
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	0.9		0.9		V	I <sub>C</sub> =20mA I <sub>B</sub> =2mA
D.C. Current Gain	H <sub>FE</sub>	25		25			I <sub>C</sub> =1mA V <sub>CE</sub> =10V
		40		40			I <sub>C</sub> =10mA V <sub>CE</sub> =10V
		40		50	200		I <sub>C</sub> =30mA V <sub>CE</sub> =10V
Current Gain-Bandwidth Product	f <sub>T</sub>	50		50		MHz	I <sub>C</sub> =10mA V <sub>CE</sub> =20V
Collector-Base Capacitance	C <sub>cb</sub>	3		4		pF	V <sub>CB</sub> =20V I <sub>E</sub> =0 f=1MHz

**MICRO ELECTRONICS LTD.**

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TYPICAL CHARACTERISTICS

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

