

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.



EBC

ABSOLUTE MAXIMUM RATINGS

		MPS-A42	MPS-A43
Collector-Base Voltage	VCBO	300V	200V
Collector-Emitter Voltage	VCEO	300V	200V
Emitter-Base Voltage	VEBO	6V	6V
Collector Current	IC	100mA	
Collector Peak Current ($t \leq 10\text{ms}$)	ICM	500mA	
Total Power Dissipation ($T_C \leq 25^\circ\text{C}$)	Ptot	1.5W	
		(TA $\leq 25^\circ\text{C}$) 625mW	
Operating Junction & Storage Temperature	Tj, Tstg	-55 to 150°C	

ELECTRICAL CHARACTERISTICS (TA=25°C)

PARAMETER	SYMBOL	MPS-A42 MIN MAX	MPS-A43 MIN MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BVCBO	300	200	V	IC=0.1mA IE=0
Collector-Emitter Breakdown	LVCEO	300	200	V	IC=1mA IB=0
Emitter-Base Breakdown Voltage	BVEBO	6	6	V	IE=0.1mA IC=0
Collector Cutoff Current	ICBO	0.1	0.1	μA	VCB=200V IE=0
				μA	VCB=160V IE=0
Emitter Cutoff Current	IEBO	0.1	0.1	μA	VEB=6V IC=0
				μA	VEB=4V IC=0
Collector-Emitter Saturation Voltage	VCE(sat)	0.5	0.4	V	IC=20mA IB=2mA
Base-Emitter Saturation Voltage	VBE(sat)	0.9	0.9	V	IC=20mA IB=2mA
D.C. Current Gain	HFE	25 40 40	25 40 50 200		IC=1mA VCE=10V IC=10mA VCE=10V IC=30mA VCE=10V
Current Gain-Bandwidth Product	fT	50	50	MHz	IC=10mA VCE=20V
Collector-Base Capacitance	Ccb	3	4	pF	VCB=20V IE=0 f=1MHz

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