

MPS6530 thru MPS6532

CASE 29-02, STYLE 1
TO-92 (TO-226AA)

AMPLIFIER TRANSISTOR

NPN SILICON

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage MPS6530, MPS6531 MPS6532	V _{CEO}	40 30	Vdc
Collector-Base Voltage MPS6530, MPS6531 MPS6532	V _{CBO}	60 50	Vdc
Emitter-Base Voltage	V _{EBO}	5.0	Vdc
Collector Current — Continuous	I _C	600	mAdc
Total Device Dissipation @ T _A = 25°C Derate above 25°C	P _D	625	mW
Junction Temperature	T _J , T _{stg}	150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	0.2	°C/mW

Refer to 2N4400 for graphs.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage (I _C = 10 mAdc, I _B = 0)	MPS6530, MPS6531 MPS6532	V _{(BR)CEO}	40 30	— —	Vdc
Collector-Base Breakdown Voltage (I _C = 10 μAdc, I _E = 0)	MPS6530, MPS6531 MPS6532	V _{(BR)CBO}	60 50	— —	Vdc
Emitter-Base Breakdown Voltage (I _B = 10 μAdc, I _C = 0) (I _B = 10 μAdc, I _C = 0)	All Types All Types	V _{(BR)EBO}	5.0 4.0	— —	Vdc
Collector Cutoff Current (V _{CB} = 40 Vdc, I _E = 0) (V _{CB} = 30 Vdc, I _E = 0)	MPS6530, MPS6531 MPS6532	I _{CBO}	— —	0.05 0.1	μAdc
(V _{CB} = 40 Vdc, I _E = 0, T _A = 60°C) (V _{CB} = 30 Vdc, I _E = 0, T _A = 60°C)	MPS6530, MPS6531 MPS6532		— —	2.0 5.0	

ON CHARACTERISTICS

DC Current Gain (I _C = 10 mAdc, V _{CE} = 1.0 Vdc)	MPS6530 MPS6531	h _{FE}	30 60	— —	—
(I _C = 100 mAdc, V _{CE} = 1.0 Vdc)	MPS6530 MPS6531 MPS6532		40 90 30	120 270 —	
(I _C = 500 mAdc, V _{CE} = 10 Vdc)	MPS6530 MPS6531		25 50	— —	
Collector-Emitter Saturation Voltage (I _C = 100 mAdc, I _B = 10 mAdc)	MPS6530, MPS6532 MPS6531	V _{CE(sat)}	— —	0.5 0.3	Vdc
Base-Emitter Saturation Voltage (I _C = 100 mAdc, I _B = 10 mAdc)	MPS6530, MPS6531 MPS6532	V _{BE(sat)}	— —	1.0 1.2	Vdc

SMALL-SIGNAL CHARACTERISTICS

Output Capacitance (V _{CB} = 10 Vdc, I _E = 0, f = 1.0 MHz) (V _{CB} = 10 Vdc, I _E = 0, f = 1.0 MHz)	All Types All Types	C _{obo}	— —	5.0 7.0	pF
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