X06141

2N5094 AND 2N5096
1 AMP
HIGH VOLTAGE PNP TRANSISTOR
450–500 VOLTS

SSDI
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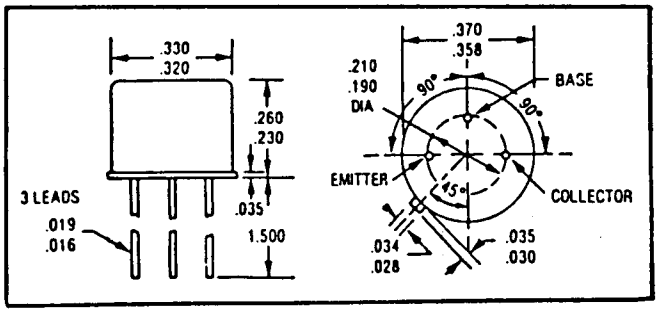
CASE STYLE W
JEDEC TO–5



FEATURES

- BVCBO TO 500 VOLTS
- LOW SATURATION VOLTAGE
- LOW LEAKAGE AT HIGH TEMPERATURE
- 200°C OPERATING, GOLD EUTECTIC DIE ATTACH
- DESIGNED FOR COMPLEMENTARY USE WITH 2N5095 THRU 2N5097
- 2N5091 AND 2N5093 ALSO AVAILABLE

MAXIMUM RATINGS

Rating	Symbol	2N5094	2N5096	Unit
Collector - Emitter Voltage	V_{CEO}	400	450	Volts
R_{BE} = 1 K Ohms	V_{CER}	450	500	Volts
Collector - Base Voltage	V_{CBO}	450	500	Volts
Emitter - Base Voltage	V_{EBO}	6.0		Volts
Collector Current	I_C	1.0		Amps
Base Current	I_B	0.5		Amps
Total Device Dissipation @ TC = 100°C	P_D	2		Watts
Derate above 100 °C		20		mW/°C
Operating and Storage Temperature	Tj, Tstg	-65 to +200		°C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Thermal Resistance, Junction to Case	RθJC	50	°C/W

ELECTRICAL CHARACTERISTICS

Characteristics		Symbol	Min.	Max.	Unit
Collector - Emitter Breakdown Voltage* (I_C = 50 mAdc)	2N5094 2N5096	BV_{CEO}*	400 450		Vdc
(I_C = 100 uAdc, R_{BE} = 1 K Ohms)	2N5094 2N5096	BV_{CER}*	450 500		Vdc
Collector - Base Breakdown Voltage (I_C = 100 u Adc)	2N5094 2N5096	BV_{CBO}	450 500		Vdc
Emitter - Base Breakdown Voltage (I_E = 20 uAdc)		BV_{EBO}	6		Vdc

NOTE: All specifications subject to change without notice.

ELECTRICAL CHARACTERISTICS

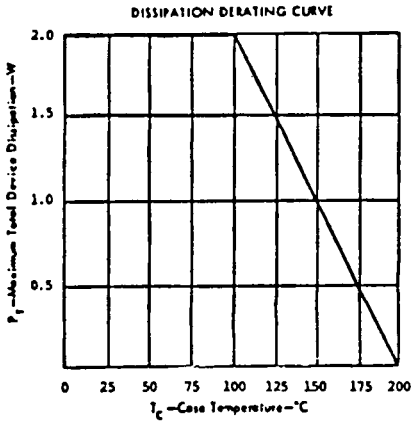
Characteristics	Symbol	Min.	Max.	Unit
Collector Cutoff Current 2N5094 VCB= 450 Vdc; 2N5096 VCB= 500 Vdc	I_{CBO}		500	n Adc
Emitter Cutoff Current (V_{EB} = 4 Vdc)	I_{EBO}		250	n Adc
DC Current Gain* (I_C = 1 mAdc, V_{CE} = 10 Vdc); (I_C = 25 mAdc, V_{CE} = 10 Vdc); (I_C = 100 mAdc, V_{CE} = 15 Vdc)	h_{FE}*	20 40 20	200 250 200	
Collector - Emitter Saturation Voltage* (I_C = 25 mAdc, I_B = 2.5 mAdc)	$V_{CE\ (SAT)}$*		3.0	Vdc
Base - Emitter Saturation Voltage* (I_C = 25 mAdc, I_B = 2.5 mAdc)	$V_{BE\ (SAT)}$*		1.0	Vdc
Current - Gain - Bandwith Product (I_C = 10 mAdc, V_{CE} = 20 Vdc, f = 5 MHz)	f_T	20		MHz
Output Capacitance (V_{CB} = 15 Vdc, I_E = 0, f = 2 MHz)	C_{ob}		20	pf

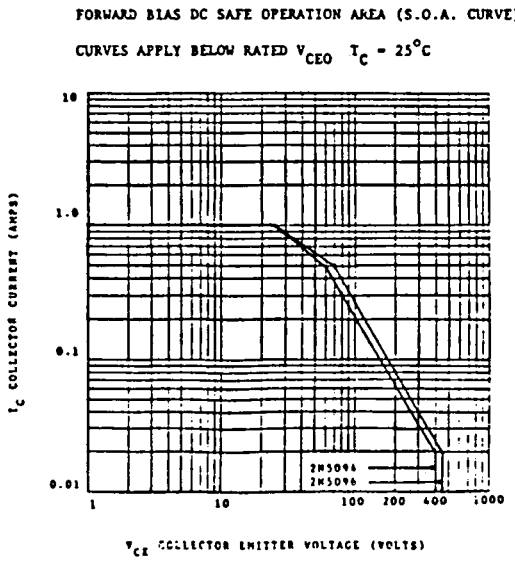
SWITCHING TIMES

Delay Time	(V_{CC} = 150 Vdc.	t_d		700	ns
Rise Time		t_r		1500	ns
Storage Time	I_C = 100 mAdc,	t_s		3	us
Fall Time	I_{B1} = I_{B2} = 10 mAdc)	t_f		200	ns

*Pulse Test: Pulse width = 300 us, DutyCycle = 2%

TYPICAL OPERATING CURVES





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