X00144

SFT6900
3 AMP
HIGH VOLTAGE PNP TRANSISTOR
500 VOLTS

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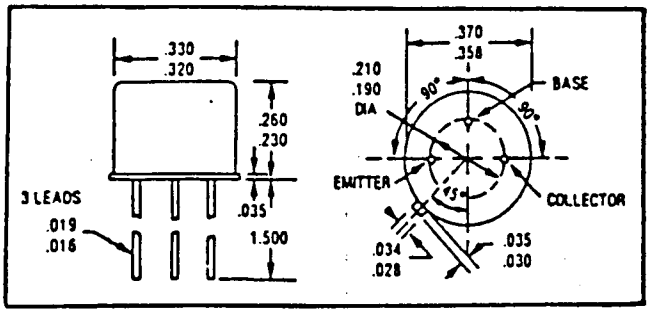
CASE STYLE W
JEDEC TO-5



FEATURES

- BVCEO TO 400 VOLTS
- LOW SATURATION VOLTAGE
- VERY LOW LEAKAGE
- 200°C OPERATING, GOLD EUTECTIC DIE ATTACH
- HIGH LINEAR GAIN FROM 1 mA TO 1 AMP
- DESIGNED FOR COMPLEMENTARY USE WITH SFT6800 (NPN) AND 2N5663 SERIES

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector - Emitter Voltage R_{BE} = 1 K Ohms	V_{CEO} V_{CER}	400 500	Volts
Collector - Base Voltage	V_{CBO}	500	Volts
Emitter - Base Voltage	V_{EBO}	9	Volts
Collector Current	I_C	3	Amps
Base Current	I_B	1	Amps
Total Device Dissipation @ TC = 25 °C Derate above 25 °C	P_D	5 160	Watts mW/°C
Operating and Storage Temperature	Tj, Tstg	-65 to +200	°C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Thermal Resistance, Junction to Case	RθJC	6	°C W

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
Collector - Emitter Breakdown Voltage* (I_C = 50 mAdc) Tp = 300 usec (I_C = 100 uAdc, R_{BE} = 1 K ohms)	BV_{CEO}* BV_{CER}*	400 500		Vdc
Collector - Base Breakdown Voltage (I_C = 100 uAdc)	BV_{CBO}	500		Vdc
Emitter - Base Breakdown Voltage (I_E = 20 uAdc)	BV_{EBO}	9		Vdc

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NOTE: All specifications subject to change without notice.

ELECTRICAL CHARACTERISTICS

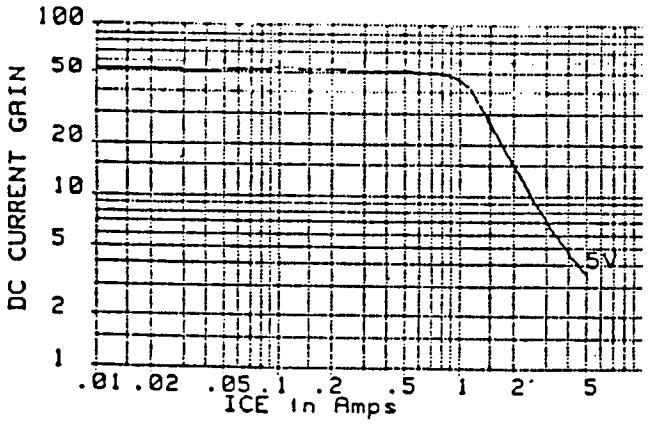
Characteristics	Symbol	Min.	Max.	Unit
Collector Cutoff Current (V_{CE} = 400 Vdc, V_{BE} = -1.5 Vdc)	I_{CEV}		200	n Adc
Collector Cutoff Current (V_{CB} = 400 Vdc)	I_{CBO}		200	n Adc
Emitter Cutoff Current (V_{EB} = 6.0 Vdc)	I_{EBO}		200	n Adc
DC Current Gain* (I_C = 50 mAdc, V_{CE} = 5 Vdc)	h_{FE}*	40	200	
(I_C = 500 mAdc, V_{CE} = 5 Vdc)		35		
(I_C = 1.0 Adc, V_{CE} = 5 Vdc)		25	250	
Collector - Emitter Saturation Voltage* (I_C = 500 mAdc, I_B = 50 mAdc)	$V_{CE\ (SAT)}$*		400	m Vdc.
(I_C = 1.0 Adc, I_B = 100 mAdc)			500	
Base - Emitter Saturation Voltage* (I_C = 500 mAdc, I_B = 50 m Adc)	$V_{BE\ (SAT)}$*		0.9	Vdc
(I_C = 1.0 Adc, I_B = 100 m Adc)			1.0	
Current - Gain - Bandwith Product (I_C = 50 mAdc, V_{CE} = 10 Vdc, f = 20 MHz)	f_T	25		MHz
Output Capacitance (V_{CB} = 30 Vdc, I_E = 0, f = 1.0 Hz)	C_{ob}		150	pf

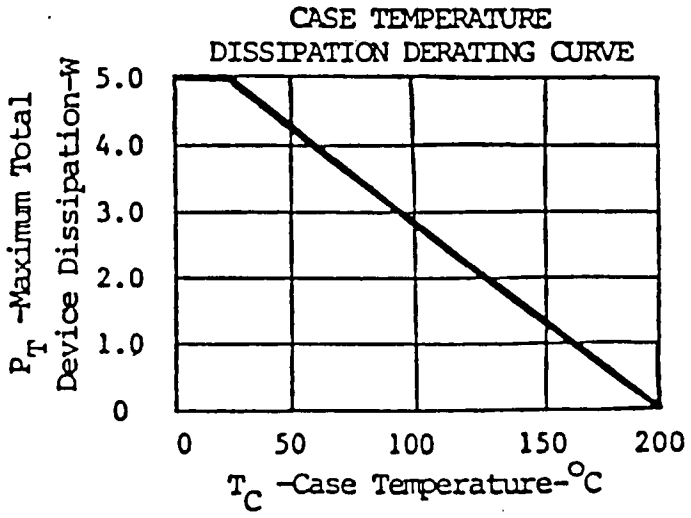
SWITCHING TIMES

Delay Time Rise Time	(I_C = 1.0 Adc, V_{CC} = 150 Vdc,	t_d + t_r		450	ns
Storage Time Fall Time	I_{B1} = I_{B2} = 100 mAdc)	t_s + t_f		1.8	us

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

TYPICAL OPERATING CURVES





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