

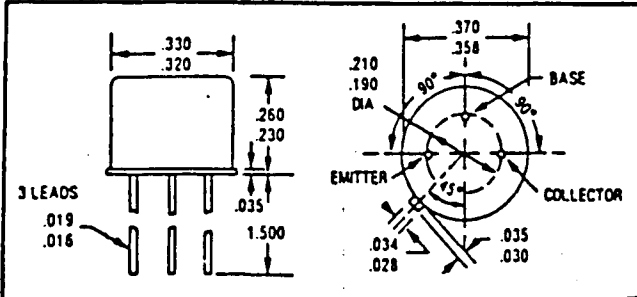
X00144

SFT6900 3 AMP HIGH VOLTAGE PNP TRANSISTOR 500 VOLTS



14830 Valley View Avenue
La Mirada, California 90638
(213) 921-9660
TWX 910-583-4807
FAX 213-921-2396

**CASE STYLE W
JEDEC TO-5**



FEATURES

- BV_{CEO} 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 $R_{BE} = 1 \text{ K Ohms}$	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 @ $T_C = 25^\circ\text{C}$ Derate above 25 °C	P_D	5 160	Watts mW/°C
Operating and Storage Temperature	T_j, T_{stg}	-65 to +200	°C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	6	°C/W

ELECTRICAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS

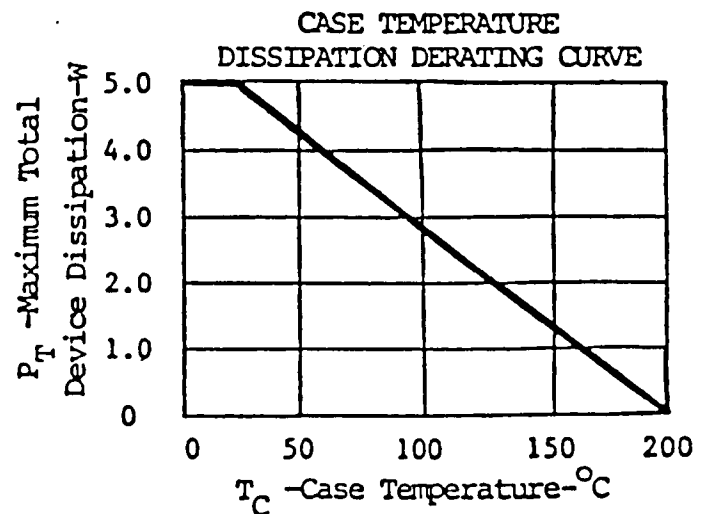
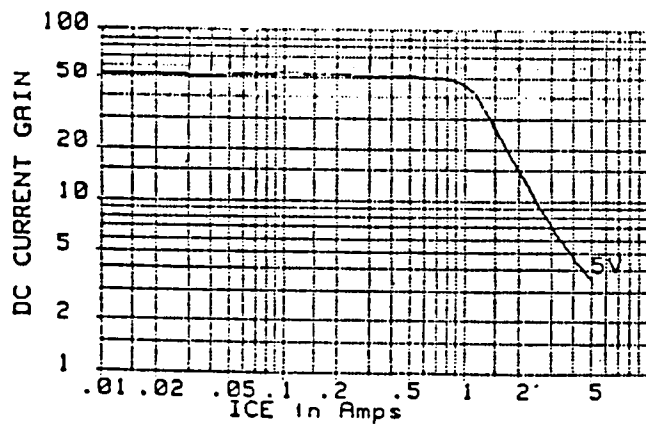
Characteristics	Symbol	Min.	Max.	Unit
Collector Cutoff Current ($V_{CE} = 400 \text{ Vdc}, V_{BE} = -1.5 \text{ Vdc}$)	I_{CEV}		200	n Adc
Collector Cutoff Current ($V_{CB} = 400 \text{ Vdc}$)	I_{CBO}		200	n Adc
Emitter Cutoff Current ($V_{EB} = 6.0 \text{ Vdc}$)	I_{EBO}		200	n Adc
DC Current Gain* ($I_C = 50 \text{ mAdc}, V_{CE} = 5 \text{ Vdc}$) ($I_C = 500 \text{ mAdc}, V_{CE} = 5 \text{ Vdc}$) ($I_C = 1.0 \text{ Adc}, V_{CE} = 5 \text{ Vdc}$)	h_{FE}	40 35 25	200 250	
Collector - Emitter Saturation Voltage* ($I_C = 500 \text{ mAdc}, I_B = 50 \text{ mAdc}$) ($I_C = 1.0 \text{ Adc}, I_B = 100 \text{ mAdc}$)	$V_{CE (SAT)}$		400 500	m Vdc.
Base - Emitter Saturation Voltage* ($I_C = 500 \text{ mAdc}, I_B = 50 \text{ mAdc}$) ($I_C = 1.0 \text{ Adc}, I_B = 100 \text{ mAdc}$)	$V_{BE (SAT)}$		0.9 1.0	Vdc
Current - Gain - Bandwith Product ($I_C = 50 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 20 \text{ MHz}$)	f_T	25		MHz
Output Capacitance ($V_{CB} = 30 \text{ Vdc}, I_E = 0.1 = 1.0 \text{ Hz}$)	C_{ob}		150	pf

SWITCHING TIMES

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

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

TYPICAL OPERATING CURVES



SSDI SOLID STATE DEVICES, INC.